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SPECIAL REPORT

OF THE

Boise Public Schools



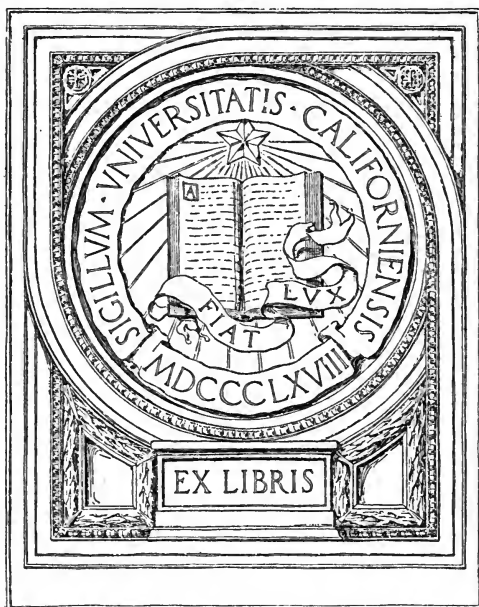
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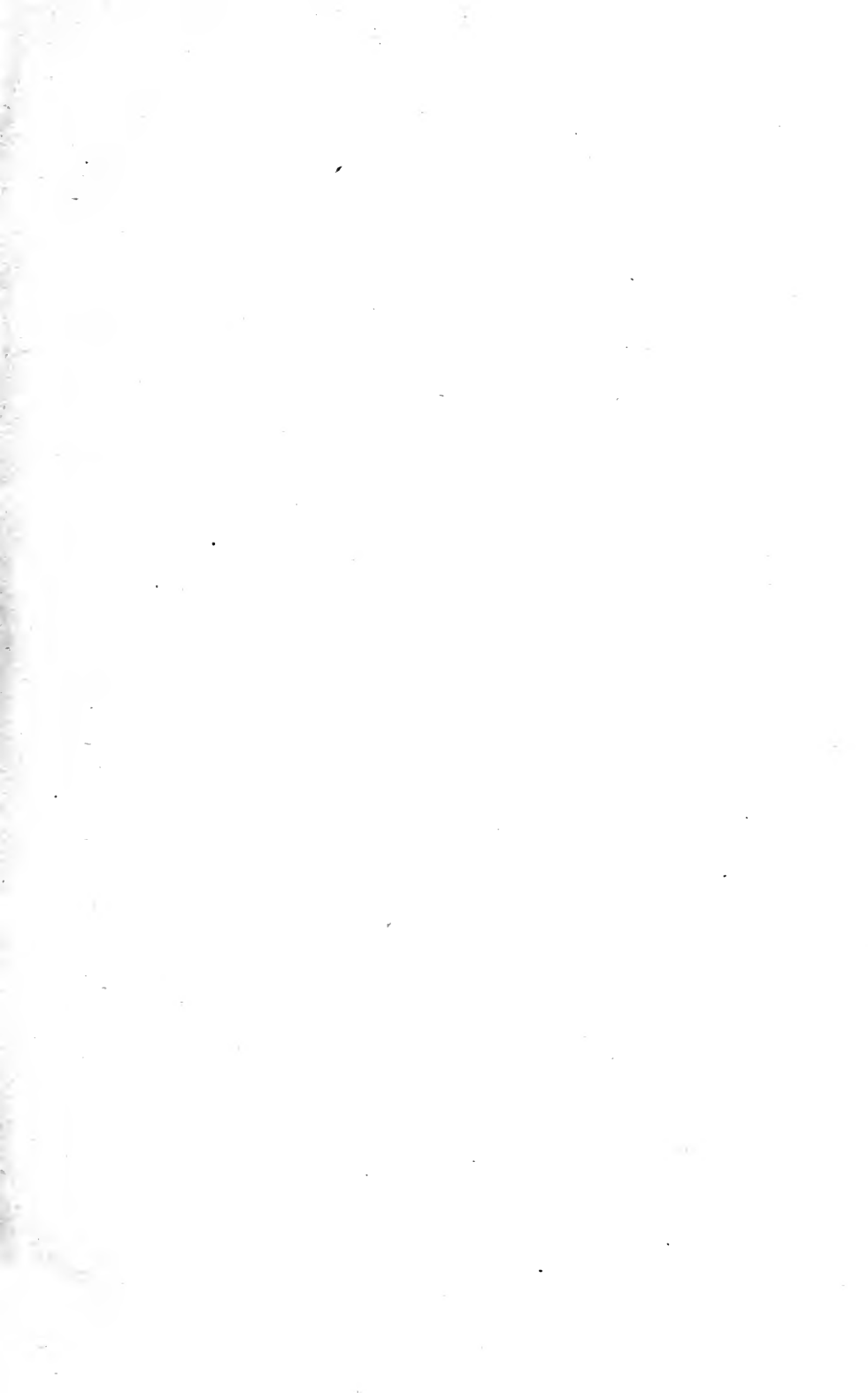
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SPECIAL REPORT

OF THE

BOISE PUBLIC SCHOOLS

Boise, Id. Board of education



1915

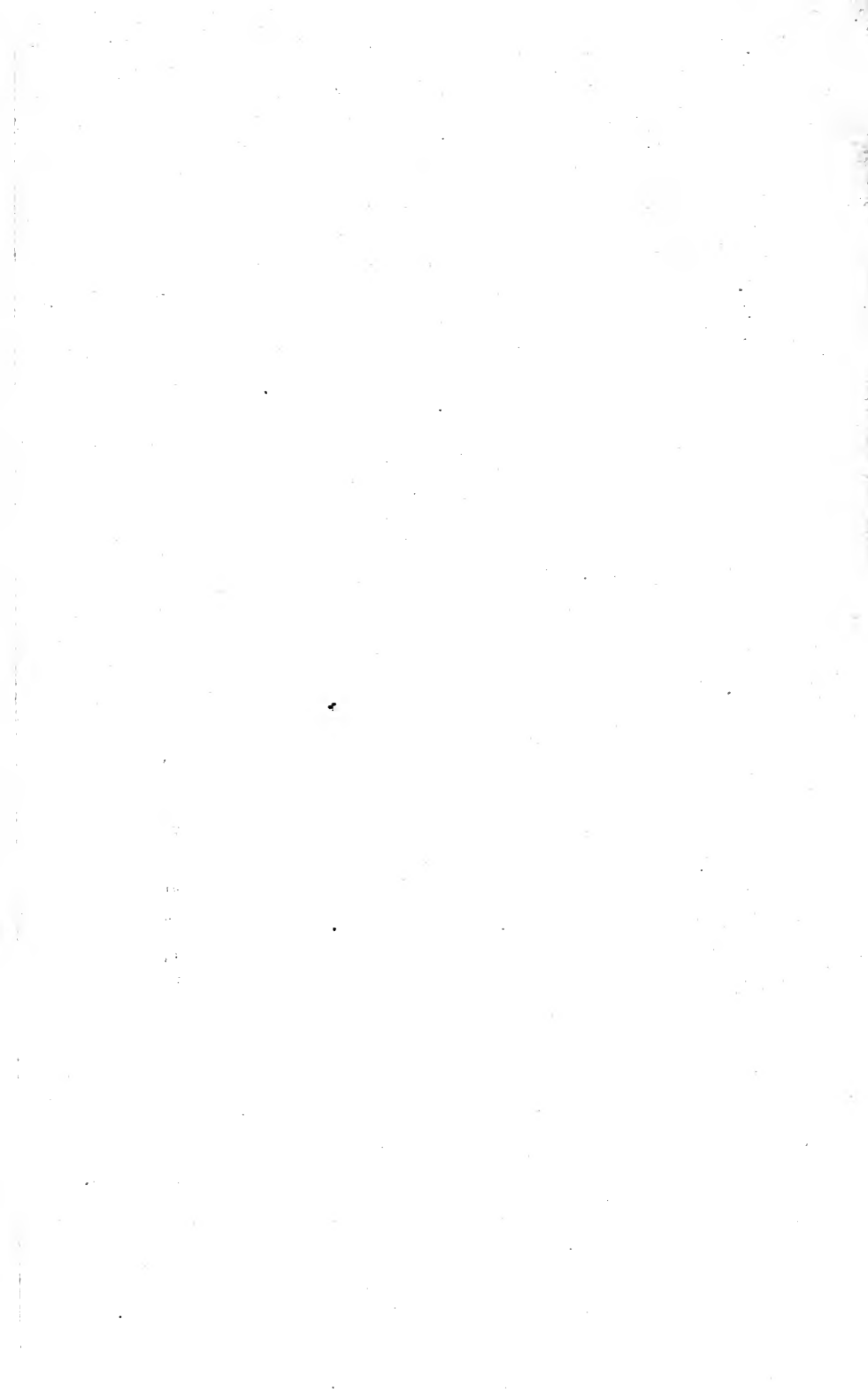
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INTRODUCTION

No annual report of the schools of Boise has been printed during the incumbency of the present superintendent. In February, 1913, the Expert Survey of the public school system of Boise was published. This survey was made by Edward C. Elliott, Professor of Education and Director of Course of Training of Teachers, University of Wisconsin; Charles H. Judd, Director School of Education, Professor of Education, University of Chicago; and George D. Strayer, head of Department and Professor of Educational Administration, Teachers' College, Columbia University. In June, 1913, a report of special teachers and supervisors was published. During the past seven years no other publications have been authorized by the Board of Education of the city of Boise.

This publication is not the superintendent's annual report, as it will deal with data accumulated through a series of years. It will not, therefore, be limited by the traditional forms of annual reports of public schools either in material presented or in methods of treatment. It will not confine itself to any one issue. Indeed, there seems to be no one particular issue about the schools of Boise as far as those who are responsible for their administration have been able to determine. The school authorities feel justified in assuming that the patrons of the school district are fairly well convinced that the public school agencies maintained by themselves at so great cost are in a satisfactory manner performing the function for which they were created and for which they are so loyally supported. Hence, the school administrators are not compelled to sub-

mit a brief in their own behalf. They are attempting in this report merely to present to the patrons of the district an account of their own stewardship.

The supervising force knows that the schools must not only run smoothly but that they must accomplish some definite and measurable results. The supervising officers have, therefore, agreed upon a policy. This policy in all its phases has been submitted to the teachers for discussion and modification. The entire teaching force have agreed upon what is wanted and how to get it and are harmoniously at work, each at his own definitely assigned and clearly understood job.

This report will attempt to present some of the educational aims of the institution, the machinery adopted for the realization of those aims, and the results so far accomplished. The intention of the compilers is to eliminate all immaterial and irrelevant statistics such as names and addresses of teachers, number of teachers and enrollment of schools through a series of years, et cetera. No attempt will be made to present all the problems which the teachers are attempting to solve, but several studies are published to show the effort that is being made to have clear and definite aims in view and to apply standards which shall, in some degree, measure the extent to which these ideals are being realized.

CHAS. S. MEEK,

Superintendent.

SPECIAL REPORT BOISE PUBLIC SCHOOLS

COST OF EDUCATION.

In these days of high taxation every item of public expenditure is properly being carefully scrutinized by taxpayers. School administrators may not expect to escape this investigation. Indeed, they should gladly furnish to the public all the data whereby patrons of the school and taxpayers, generally, may know the cost of their own school system in relation to other schools of the same class.

The Bureau of Statistics has, for cities of all classes, estimated public school expenditures on the per thousand of total population of the cities enumerated. In comparison with cities of its class, Boise ranks high in school expenditures, reckoned upon total population, but any estimation of school expenditure based upon population outside of school is in favor of inefficiency rather than efficiency of the school system under investigation. Recent investigations reveal the fact that public schools, generally, retain a small per cent of the children for the entire twelve years. Fifty per cent of the children have been eliminated by the time they have reached the sixth year, seventy-five per cent by the time they have reached the eighth year and less than ten per cent are enrolled in the high school. The average city, therefore, must provide educational facilities for only fifty per cent of the children for the sixth year and only twenty-five per cent for the seventh and eighth years and less than ten per cent for the high school. Any estimation of expenditure based on population outside of school would be in favor of the school system that eliminates the children and against the system that retains an unusual number.

At the end of the present year, the Boise schools had enrolled in the second year of the elementary schools 334; in the sixth grade 359; 350 in the seventh grade; 365 in the eighth grade; and 356 in the first year in the high school. These figures show that the schools of Boise instead of eliminating fifty per cent by the time the sixth year is reached, 75 per cent in the eighth year and retaining less than ten per cent for the high school, retains practically

all of the children not only for the eight grades but for the high school as well. Twenty-six per cent of all the children are enrolled in the high school. Relatively few in the high school come from outside the district, as only \$3,300 tuition is collected at forty dollars per pupil. These figures show that Boise is providing school facilities for almost three times as many children in the grammar grades and the high school as the average city provides. The most generally accepted standard for measuring the efficiency of a school system is that of finding what proportion of the children are retained in the grammar grades and in the high school. On this standard Boise heads the list for cities in the United States. No other city of twenty-five thousand or over has twenty-six per cent of its total enrollment in the high school.

When school expenditure is measured by population, every pupil retained becomes a handicap rather than an asset. The only equitable and really scientific standard of getting at relative costs of school systems is that of finding the cost per pupil enrolled.

Fifty-two cities generally distributed throughout the United States, most of them in the thirty thousand list, show a per capita expenditure in the high school ranging from \$150.00 down to \$50.64. Los Angeles, California, being at the top of the list, \$150.00, and Kingston, N. J., at the bottom, \$50.64. In this list, Boise, with a per capita expenditure of \$71.45, ranks thirty-fifth, or is the ninth city below the average. If this list were extended to include all the cities in the United States of twenty-five thousand and over, Boise's standing would yet not be materially above the average. While the high school cost per capita is not above the average, its educational standing is certainly far above the average. In the high school, too, we have a greater amount of industrial work than most cities of any size in the country. It is generally understood that industrial activities cost more than the traditional studies, yet with the addition of these industrial courses, Boise's standing is not above the average for cities having distinctly traditional curricula.

Per Capita Cost of Expenditure in High Schools.

1.	Los Angeles, Cal.....	\$150.00
2.	Pasadena, Cal.....	134.00
3.	Niagara, N. Y.....	101.20
4.	Seattle, Wash.	101.00
5.	Bayonne, N. J.....	100.00
6.	San Diego, Cal.....	99.04
7.	East Orange, N. J.....	98.70
8.	Evansville, Ind.	92.78
9.	Newark, N. J.....	89.50
10.	Watertown, N. J.....	87.75
11.	Dayton, Ohio.....	86.87
12.	New Rochelle, N. Y.....	86.56
13.	Pueblo, Colorado....	85.35
14.	Riverside, Cal.....	85.33
15.	Spokane, Washington.....	82.78
16.	East St. Louis, Mo.....	82.75
17.	Fresno, Cal.	82.32
18.	El Paso, Texas.....	81.35
19.	Cambridge, Mass.	79.98
20.	Troy, New York.....	79.93
21.	Muskogee, Oklahoma.....	79.83
22.	Yonkers, N. Y.....	79.70
23.	Montgomery, Alabama.....	79.63
24.	Santa Cruz, California.....	79.63
25.	Hampton, N. J.....	79.50
26.	Salt Lake City, Utah.....	79.19
27.	Rockford, Illinois.....	78.83
28.	San Jose, California.....	78.75
29.	Holrock, N. J.....	75.80
30.	Elizabeth, N. J.....	75.40
31.	Torrington, Conn.	75.14
32.	Eureka, Cal.	75.09
33.	New Bedford, N. Y.....	75.00
34.	Denver, Colorado.....	72.93
35.	BOISE, IDAHO.....	71.45
36.	Decatur, Illinois.....	69.74
37.	Waterbury, Conn.....	69.73
38.	Tacoma, Washington.....	69.66
39.	Poughkeepsie, N. Y.....	69.44
40.	Auburn, N. Y.....	68.89
41.	Utica, N. Y.....	68.67
42.	Maldon, Mass.	68.55
43.	Newport, R. I.....	66.38
44.	Cairo, Ill.	64.21
45.	Everett, Mass.	64.00
46.	Ogden, Utah	60.83
47.	Fitchburg, Mass.	56.24
48.	Canton, Ohio	55.30
49.	Topeka, Kansas	54.93
50.	Altoona, Pa.	53.09
51.	Green Bay, Wisconsin.....	52.25
52.	Kingston, N. J.....	50.64

In per capita cost of grade pupils, Berkeley, California, is at the head of a list of forty-seven cities with a per cap-

ita cost of \$51.32; and York, Pennsylvania, is at the bottom of the list with a per capita cost of \$28.02. Boise ranks fourteenth in this list with a per capita cost of \$37.41, which is only \$1.76 per capita above the average of the forty-seven cities. This small amount above the average cost of grades is accounted for, first, by the fact that the teachers in Boise are, none of them, employed at a low salary. The Board of Education has insisted upon an educational qualification and the high standard for teachers makes it impossible to secure teachers of the class they demand at a low salary. The second condition is that the number of pupils per teacher is about thirty, while most cities have forty and above. Yet with all these conditions, the Boise schools are only \$1.76 above the average per pupil, \$13.91 below the maximum, and \$9.39 above the minimum.

Per Capita Cost of Expenditure in Elementary Schools.

1.	Berkeley, California	\$51.32
2.	New Rochelle, N. Y.....	49.51
3.	Clinton, Iowa	48.47
4.	Oakland, California.....	43.64
5.	Newton, Mass.	41.41
6.	Riverside, California.....	41.24
7.	Spokane, Washington.....	41.05
8.	East Orange, N. J.....	40.54
9.	San Diego, California.....	39.64
10.	Fresno, California	39.42
11.	Salt Lake City, Utah.....	38.34
12.	Hampton, N. J.....	37.41
13.	Holyoke, Mass.	37.41
14.	BOISE, IDAHO	37.41
15.	Troy, N. Y.....	37.40
16.	Springfield, Illinois	37.19
17.	Quincy, Mass.	37.15
18.	Santa Cruz, California.....	37.00
19.	Pawtucket, R. I.....	36.85
20.	Tacoma, Washington.....	36.32
21.	Newark, N. J.....	35.44
22.	Eureka, California	35.32
23.	Denver, Colorado.....	35.04
24.	Youngstown, Ohio	34.94
25.	Utica, N. Y.....	34.61
26.	Saginaw, Michigan	34.07
27.	Bayonne, N. J.....	34.07
28.	Elmira, N. Y.....	33.69
29.	Topeka, Kansas	33.66
30.	Dayton, Ohio	33.54
31.	Evansville, Indiana	33.38
32.	Meriden, Conn.	33.08
33.	Sioux City, Iowa.....	32.61

34. New Bedford, Mass.....	32.58
35. Saginaw, West Side, Mich.....	32.41
36. Fitchburg, Mass.	31.33
37. South Bend, Indiana.....	31.27
38. East St. Louis, Illinois.....	31.03
39. La Crosse, Michigan.....	30.64
40. Ogden, Utah	30.37
41. Ithaca, N. Y.....	29.65
42. New Luchet, Conn.....	29.59
43. Decatur, Ill.	29.25
44. Elizabeth, New York.....	28.77
45. Sheboygan, Wisconsin.....	28.29
46. Altoona, Pa.	28.22
47. York, Pa.	28.02

(These tables were prepared by W. S. Deffenbaugh, Chief of the Department of School Administration, Bureau of Education, Washington, D. C., and were used by him to standardize the cost of education in the city of Ogden, Utah).

SCHOOL ATTENDANCE.

The problem of maintaining punctual and persistent attendance of all the children at school is important in school management. Irregular attendance interferes greatly with the efficiency and economy of school effort. It is the duty of the community not only to support education, to control and manage it, but also to enforce it upon the community, to see that every child attends school as regularly as possible.

The Idaho law requires that all children shall attend school until they have completed the elementary school course of eight grades, or until they are eighteen years of age. If children have reached the age of sixteen and have not completed the course, they may be excused from attendance by the city or county superintendent. In Idaho, as in other states, much good legislation relating to children is ineffective unless there be established good machinery for the enforcement of the law. For the enforcement of compulsory school attendance laws, there must be an accurate registration of all the children contributory to a given school district. Early in the school year all the children on the registration list and not enrolled in the public or parochial schools must be checked and a list furnished to the attendance officers for investigation. Otherwise, the officers have no definite information as to those children that are in school and those that have not yet enrolled. These officers are, consequently, compelled

to do their work in a most unsystematic fashion, seeking children on the streets, on the playgrounds, in the parks and other places of resort. To avoid these difficulties, a careful registration is taken in Boise of all the children between the ages of six and twenty-one. For every child in the district the following information is collected: Name of parent or guardian, sex, age, date of birth, and residence. The registration list is submitted to the teachers who check the names of all the children enrolled in the school. The attendance in the parochial schools is checked in the same careful manner. The names of children who are legitimately out of school because of poor health or for other reasons are then checked up in the superintendent's office. The permits he has issued makes this record accurate. The attendance officers are then furnished a list of all the children who have not yet entered school and also a list of those who attended irregularly during the previous year. The officers immediately go to the homes of the children whose names are furnished them, and insist on immediate and regular attendance at school.

A careful and accurate census of all the children between the ages of six and twenty-one contributory to the Boise schools was taken in September, 1914. The attendance officers, the principals, and teachers used this census vigorously to get all the children in school and to account for every child. A checking of the census in December showed the following results:

Age	In public schools	In non-public schools	Out of school
6	375	20	3
7	392	16	0
8	423	17	0
9	361	17	0
10	390	18	0
11	355	16	0
12	353	16	1
13	310	18	1
14	348	18	2
15	314	25	6
16	327	23	13
17	325	31	82
18	201	..	188
19	95	..	257
20	41	..	214
Total in public and non-public schools.....			4845
Total out of school.....			767
Total			5612

In the table presented above many of the pupils eighteen years of age and a considerable number of those seventeen years old, marked "Out of School" had graduated from the high school. A proportion of those sixteen years of age and marked "Out of School" had completed the elementary school. A careful checking of the registration to find the number under eighteen who had not completed the elementary school and were out of school revealed the results presented in the following table:

Age.	Number.
12	1
13	1
14	2
15	6
16	13
17	22
Total	45

The cause of the absence of every child in the above list was investigated, and a special permit issued by the Superintendent.

The above table shows that all agencies working together to keep all the children in school have been unusually successful. A total of 45 pupils under 18 years of age who are out of school and have not completed the elementary school is surely gratifying to all concerned.

PER CENT OF THIRTEEN-YEAR-OLD BOYS IN AND ABOVE THE SEVENTH GRADE.

(Table prepared by Dr. Leonard P. Ayres, Russell Sage Foundation, 1912-1913).

City—	Per cent of boys in and above seventh grade
BOISE, IDAHO	75
1. Brockton, Mass.	77
2. Aurora, Ill. (East)	73
3. Kalamazoo, Mich.	64
4. Waterloo, Iowa	63
5. Scranton, Pa.	62
6. Decatur, Ill.	61
7. Aurora, Ill. (West)	60
8. Holyoke, Mass.	59
9. Racine, Wis.	57

10.	Newport, R. I.	57
11.	Mobile, Ala.	57
12.	Amsterdam, N. Y.	54
13.	Rockford, Ill.	54
14.	Davenport, Iowa	54
15.	Pittsfield, Mass.	54
16.	Patterson, N. J.	53
17.	Saginaw, Mich. (West)	52
18.	Lancaster, Pa.	52
19.	Dubuque, Iowa	51
20.	York, Pa.	51
21.	Evansville, Ind.	51
22.	Norwich, Conn.	50
23.	Auburn, N. Y.	50
24.	Utica, N. Y.	49
25.	Springfield, Ohio	49
26.	Syracuse, N. Y.	49
27.	San Diego, Cal.	49
28.	Chicopee, Mass.	49
29.	Tacoma, Wash.	49
30.	Meriden, Conn.	49
31.	Elmira, N. Y.	47
32.	Springfield, Mo.	47
33.	Saginaw, Mich. (East)	46
34.	Waterbury, Conn.	45
35.	Joliet, Ill.	45
36.	Council Bluffs, Iowa.	45
37.	Flint, Mich.	45
38.	Binghampton, N. Y.	45
39.	South Omaha, Neb.	44
40.	Madison, Wis.	44
41.	Canton, Ohio	44
42.	Superior, Wis.	44
43.	Columbus, Ohio	44
44.	Reading, Pa.	42
45.	Harrisburg, Pa.	42
46.	Williamsport, Pa.	41
47.	Niagara Falls, N. Y.	40
48.	Albany, N. Y.	40
49.	Hazelton, Pa.	39
50.	South Bend, Ind.	38
51.	Troy, N. Y.	38
52.	Hamilton, Ohio	38
53.	Atlanta, Ga.	37
54.	Pueblo, Colo. (Dist 1)	36
55.	Lincoln, Neb.	36
56.	Chattanooga, Tenn.	36
57.	Bay City, Mich.	35
58.	New Bedford, Mass.	34
59.	Portland, Me.	34
60.	Manchester, N. H.	34
61.	Fall River, Mass.	34
62.	Johnstown, Pa.	33
63.	Nashville, Tenn.	33
64.	Youngstown, Ohio	33
65.	New Britain, Conn.	33
66.	Danville, Ill.	32

67. Galveston, Tex.	32
68. Trenton, N. J.	31
69. Pueblo, Colo. (Dist. 20)	28
70. Woonsocket, R. I.	24
71. Richmond, Va.	24
72. Norfolk, Va.	21
73. Lansing, Mich.	21
74. Birmingham, Ala.	20
75. Columbia, S. C.	18
76. Charleston, S. C.	18
77. Bridgeport, Conn.	16
78. Portsmouth, Va.	12

There are 83 per cent of the thirteen-year-old girls in and above the seventh grade, in the Boise schools.

This high standing of Boise may be accounted for by the fact that every student is kept in school, and, also, by the fact that every effort is made to keep students from failing and thus becoming retarded through school. Constructive efforts to eliminate retardation is explained in the chapter that follows, but the school management cannot claim for the teachers the entire credit for this unusual showing. The character of the school population is especially fine. Boise has few foreigners, no factories of any consequence, and is simply a residential city. The school has to contend, therefore, with very few juvenile delinquents and practically no indigent children.

A STUDY IN RETARDATION AND ACCELERATION.

In most public schools, the curriculum for each grade of the elementary school contains a rather clearly defined body of facts and principles, the mastery of which is the necessary requisite of promotion. The marks that are given to each child are merely the teacher's estimate of the completeness of this mastery.

If a uniform test of ability is applied to all the children, they naturally fall into three groups: (1) Those who fail and are compelled to repeat the work of one or more grades and thus require more than the regularly allotted time to complete the course; (2) those who make normal progress and complete the eight grades in eight years; (3) those who receive double promotions, skip grades, and complete the course in one or more terms less than the time assigned by the course of study. The second group,

including all those who make normal progress, presents no very difficult administrative problems. It should contain the very great majority of all the pupils. In this class may be found the certain performers, those who respond readily to group instruction, who do not require special attention and individual methods of treatment. This group fixes the grade standards for the entire school. It is counted upon to complete the work of each grade in the allotted time and to advance regularly at each promotion period.

One of the most difficult and administrative tasks is to adjust school machinery to fit the needs of all the pupils, to secure the most effective and successful work from the child of average ability and yet not neglect the interest of the unusually bright one or the exceptionally dull one. In the public schools as now organized, the three types of children are not adequately protected. According to a conservative estimate (Pamphlet 77, Russell Sage Foundation), there are in the average American city at least ten times as many children who are advancing more slowly than the normal rate than there are of those who are advancing more rapidly than the normal rate. This means that the course of study is not adapted to the slow child or to the one of average ability, but to the unusually bright pupil. Readjustment is, therefore, necessary until the number making slow progress is about equal to the number making rapid progress. The problem then remains to work out successful methods of caring for the needs of the exceptionally bright and the exceptionally dull pupils.

As a preliminary step toward the solution of this problem, a detailed investigation was made in 1909 of the amount of retardation in the Boise schools. The standard adopted was the one by which Dr. Maxwell rated as over age all children in the first grade who were eight years of age or older; all those in the second grade who were nine years old or more; and so on for each of the succeeding grades. (This standard is used by Dr. Leonard P. Ayres and is explained on p. 27, "Laggards in Our Schools.") The investigation brought to the attention of the school authorities of Boise that 51 per cent of the children were retarded. Efforts were at once made to adjust the cur-

riculum more nearly to the abilities of the average child and to give special attention to the exceptionally slow and unusually bright pupils. Two years of intensive work along these lines had, in June, 1911, reduced the amount of retardation from 51 per cent to 32.8 per cent. But there were yet too many over-age pupils in all the grades. These were far from being balanced by the number who were under age for their grade. Those making less than normal progress yet outnumbered those advancing more rapidly than the normal rate. Since the over-age pupils were in excess of the under-age for each grade, many children were making slower progress than they should make and were able to make. For a number of years, therefore, the double promotions would be in excess of the failures before a situation could be reached whereby the age and grade distribution would show the vast majority at the normal age for their respective grades and the remainder about equally divided into the over-age and the under-age groups. During the past four years, supervisors, principals, and teachers have been laboring to achieve this end, but before consistent teamwork could produce measurable results toward that achievement, all had to agree upon a standard of promotion. As stated above, the standard for the majority who were advancing at the normal rate is the mastery of the subject-matter of the curriculum for each grade.

But this standard could not be maintained for those pupils who were handicapped by limited educational opportunities or for those who were subnormal in intelligence. If these unfortunates must equal the achievements of the normal group before being permitted to advance, most of them would be condemned to the ranks of repeaters. A study of the performances of the failure in Boise has convinced the entire force that the repeater is generally a quitter and does about as poor work in his second attempt as in his first trial at the work of a given grade. The stamp of disapproval has been placed upon him. He starts on his second attempt with a grievance against the teacher and the entire institution. The parents as well as the child feel injured, so that the teacher must combat both the antagonism of the home and the hostility of the pupil, who has been trained for failure and not for success, and

who becomes either morbidly sensitive or brazenly indifferent. What the laggard would probably do as a repeater is therefore quite definitely known. If he were permitted to advance, he could hardly do worse and he might do better. It is less expensive and more human to promote him than it is to degrade him. This view of the situation is generally accepted in Boise. The standard for promoting the dull pupil is entirely individual. He is not compelled to do all the work of his present grade before he is permitted to pass to the next. He is even allowed to pass on without manifesting enough ability to justify the hope that he may be able to do the work of the advanced grade. The question is reduced to the one consideration: Would he do better if advanced than he would as a repeater?

In every grade of twenty which is promoted in Boise, there is an average of two who have not satisfactorily completed the work of the lower grade. These are accepted by the teacher as special cases to which she is expected to give individual attention both in and out of school hours. She is not held responsible for the work of the special pupil, but is given credit for all progress that she can stimulate. She gets the enthusiastic co-operation of the home, for the parents know that their unfortunate offspring has been treated generously and leniently. They thus aid in every possible way to bring their child up to the standard. This policy of dealing with laggards has the indorsement of the great majority of teachers. The concensus of opinion is that those who are permitted thus to advance more nearly approach the standard of the advanced grade than they would of the lower grade had they been compelled to repeat. This is not surprising when one considers how little there is in the curriculum that is so connected and consecutive that one year's work depends upon the completion of the subjects of the previous year. The obvious objection to this plan is that it breaks down all grade standards, that it puts a premium on inferior work, that it takes away from the normal group the stimulus of being compelled to reach a degree of proficiency required of all for promotion. This false educational theory and the reluctance of teachers to promote weak pupils because they fear what the instructors in the advanced grades may say of their products have congested the pri-

mary grades with laggards and have eliminated from the schools 50 per cent of the children before they have completed the sixth grade and 75 per cent of them before they have completed the eighth grade.

In Boise, all grade standards are ignored in permitting weak pupils to advance, but the normal pupils treat these special cases with sympathetic toleration and do not relax in their own efforts because their handicapped companions are not held to the standard of work required of themselves. Standard tests of efficiency in which the work of these specially promoted pupils must be tabulated with the class demonstrate that the work of each grade is more thorough than it was three years ago before this policy of promoting the slow pupils had been generally adopted. Neither has this flexible stand of promotion increased the number doing unsatisfactory work. Early in December of the present school year all teachers were asked to send to the superintendent's office the names of all pupils who were unable to respond to such group and special instruction as could be given in the classes as now organized. From an enrollment of 2,700, but 48 pupils were so designated. A number test was later given, and three of those made 100 per cent where the standard for their grade was 85 per cent. A spelling test was also given which was submitted by Dr. Leonard Ayres. One of the 48 made 95 per cent, and the standard was 70 per cent. At a later conference with the teachers the list of 48 pupils was cut to 17. These were placed in an ungraded room at the beginning of the second semester. Many other examples could be produced to show that the individual method of promoting slow pupils has not lowered the standard of the school. Ample proof could also be collected to demonstrate that never before have there been so few students who were not doing satisfactory work in their present grades.

TABLE I.—Percentage of children in each grade above normal age in June, 1911, and the percentage above normal age in June 1915.

Grade	1	2	3	4	5	6	7	8	Total
Percentage above normal age, June, 1911.....	12.6	19.2	32.2	43.1	44.1	45.3	40.4	34.5	32.8
Percentage above normal age, June, 1915.....	6.2	6.2	7.3	13.9	18.2	17.8	23.1	31.5	18.1

As appears in Table I, the amount of reduction in percentage of retardation produced during the four years is not so great for the seventh and eighth grades as for the lower grades. The reason for this is apparent when the high percentage of retardation in the fourth, fifth, and sixth grades, June, 1911, is observed. By double promotions, some of these retarded pupils had been brought up to normal in the four years. But many were so far behind that they could not be pushed into the normal group in the few remaining years of the elementary school course. This reduction of percentage of retardation from 32 per cent to 18 per cent in four years is not, on the face of it, a distinctive achievement, but the difficulty of accomplishing decided results along this line is increased by the fact that a large percentage of the population of western cities shifts each year. More than 10 per cent of the pupils enrolled in the elementary schools of Boise this year have come from other schools. Of these new pupils, 35 per cent are over age as against 5 per cent under age. In 1911, the years lost by slow children were so in excess of the years gained by pupils making rapid progress that not only must the number making slow progress be reduced materially, but, also, the number of those making rapid progress must be decidedly increased before the number over age in each grade should be balanced by the number under age.

TABLE II—*Percentage of under-age children in each grade, 1911, and percentage of under-age children in each grade, 1915.*

Grade	1	2	3	4	5	6	7	8	Total
Per cent under age, 1911....	0	8.4	9	9	9.3	7.7	7.6	8.1	7.8
Per cent under age, 1915.....	19.7	26.9	31.6	25.2	24.7	25.6	26.2	18.6	23.4

Table II shows that the total percentage of under-age pupils has been more than tripled during the four years. The number of those in the under-age group is now much greater than that in the over-age group. The reports in June, 1915, showed 18.1 per cent over age as against 23.4 per cent under age.

Just as the number making slow progress was decreased by ignoring for the slow pupils the standards of promotion applied to those making normal progress, so the num-

ber making rapid progress has been increased by individual investigation and individual treatment. The report of 1911 showed a large percentage over age and a small percentage under age. It was, therefore, very obvious that fewer pupils should be in the slow group and more children should make rapid progress. To equalize this situation, the double promotions must exceed the failures. But to realize this desired end, pupils capable of making rapid progress must be found and pushed forward. Teachers were, therefore, asked to furnish a list of pupils who were maintaining their grade's standing and yet expending less than the amount of energy required from the average child to accomplish the same purpose. When these pupils were reported to the supervisors of instruction, their ability to do the work of advanced grade was tested. The supervisors placed in the advanced grade all pupils who appeared to possess unusual ability. This policy has been in operation for four years. No definite time is fixed for double promotion. When a child of exceptional ability is found, he is promptly put forward. Those advanced are not always the younger pupils; often they are overgrown boys and girls, who, in former years, have failed of promotion or who entered school late, or who have attended irregularly. No effort has been made to drill pupils thus advanced on the subject-matter of the curriculum they missed by the promotion. They were merely given an opportunity to try the work of the advanced grade. If they could do it, they remained there; if they were unequal to the task, they dropped back.

During the second semester of the school year, 1912-13, and the two semesters of 1913-14, 440 such double promotions were made. The pupils thus advanced constituted more than 10 per cent of all enrolled.

TABLE III—*Percentage of ranks 1, 2, 3, and 4, given to the 440 pupils thus pushed into advanced grades, compared with the percentage of ranks 1, 2, 3, and 4, given to all the pupils in all the grades in the June report 1914.*

Grade	1	2	3	4
440 pupils receiving double promotions	48	38	13	1
All the pupils in all the grades, June, 1914.....	26	35	28	11

A comparison of the relative class-standing of the 440 pupils receiving double promotions with the average class-standing of the pupils in all the grades is enlightening. Each of the pupils who are eligible for promotion at any promotion period receives rank, 1, 2, 3, or 4. Rank 1 is the highest rank and rank 4 is the lowest passing mark. To determine the distribution of passing marks for all the pupils in all the grades as they are shown on the records in June, 1914, all the 1's, 2's, 3's, and 4's were counted and the percentage of each calculated. In the same way the distribution of the marks of the 440 pupils receiving the double promotions was calculated. The first marks they received in the class to which they were promoted in every case are taken as the standard. Reference to Table III will show that while the percentage of 1's given to all the pupils was 26, the 440 pupils advancing more rapidly than the normal rate received 48 per cent of the 1's. All the children received eleven times as many 4's, the lowest passing mark as were recorded against the 440 pupils making rapid progress. Not a failing mark (rank 5) has been recorded against one of those pushed forward. This comparison demonstrates that the pupils thus advanced immediately assumed rank far above the average of the class to which they were promoted. They almost invariably maintained the same relative rank in the class from which they came. This is additional proof that the work of the elementary school is not so connected and consecutive that the curriculum of the advanced grade cannot be successfully mastered until all the work of the lower grade has been completed. This fact must constantly be impressed upon teachers if they are to be induced to adopt flexible standards of promotion.

TABLE IV—*Percentage of ranks 1, 2, 3, 4, made for the two semesters 1914-15 by pupils doubly promoted the previous semester.*

No. pupils	1's	2's	3's	4's
239	47	38	11	2

Table IV is a confirmation of the interpretation of the data for 1913-14.

The teachers in Boise realize that the ideal situation would indicate that the course of study and the system of

promotion were so adjusted that most of the children would advance at the normal rate, the slow ones requiring more time to do the work, and an equal number of bright ones advancing more rapidly than the normal rate. But in years past, the number making slow progress has been so in excess of the number making rapid progress that the entire force is now working to reverse the situation until the number of over-age pupils in each grade is balanced by the number under age.

As indicated by Table V, the percentage of double promotions is more than double that of failures for all grades but the first primary. Many children get into the first primary before they are six, and therefore cannot keep the pace set by the pupils of normal age. No official age record being available, the age given by the parents must be accepted. But the failures in the first primary do not materially increase retardation as most of the children who repeat are yet well within the normal age for their grade.

In estimating school expenditure the usual inquiry is the average expenditure for each child in the school system. The more significant standard is the average cost of advancing each child one grade. If the time lost by pupils advancing more slowly than the normal rate is equal to the time gained by children who make rapid progress, the average per capita cost of keeping all children in school for one year and advancing all of them one grade is just the same. In school systems where time lost by children making slow progress is in excess of time gained by children making rapid progress, the cost of sending each child forward one grade is greater than the cost of keeping each child in school one year. The amount of excess cost of one year's advance over one year's schooling depends upon the ratio of years lost to years gained. In the average American city there are ten times as many children making slow progress as there are making rapid progress. (Pamphlet 77, Russell Sage Foundation). The average cost of advancing the children one year is, therefore, considerably greater than the cost of keeping them in school one year.

TABLE V—Number on the promotion list, number promoted, number not promoted, number receiving double promotions; percentage not promoted, percentage receiving double promotions, for the two semesters of the school year 1913-1914.

Grade	Promotion list	Promoted	Not promoted	Percentage not promoted	Double promotions	Percentage double promotions
I.....	757	652	105	13.8	98	12.94
II.....	609	598	11	1.81	41	6.73
III.....	547	532	15	2.74	37	6.78
IV.....	650	631	19	2.92	34	5.23
V.....	631	624	7	1.11	23	3.65
VI.....	611	597	14	2.29	42	6.87
VII.....	603	586	17	2.82	4	.66
VIII.....	542	532	10	1.85	1	.185
Total	4,950	4,752	198	4.00	280	5.65

(As there are two semesters in each term, each pupil is counted twice. The 198 and 280 represent, respectively, terms lost and terms gained.)

During the school year 1913-14, in Boise, there were 99 years lost as against 140 years gained. Hence, the cost of one year's advance was a trifle less than the cost of keeping the children in school for one year. The excess of years gained over years lost was 41. The average per capita cost of one year's attendance was \$38.00; thus 41x\$38.00 equals \$1,558.00. The total cost of advancing all the children one grade was \$1,558.00 less than the cost of keeping them all in school for one year. (Pamphlet III, Russell Sage Foundation).

TABLE VI—Number on the promotion list, number promoted, number not promoted, number receiving double promotions; percentage not promoted, percentage receiving double promotions for the two semesters of the school year 1914-1915.

Grade	Promotion list	Promoted	Not promoted	Percentage not promoted	Double promotions	Percentage double promotions
I.....	713	662	51	7.	89	12.
II.....	546	532	14	2.5	43	7.9
III.....	665	656	9	1.3	54	8.
IV.....	622	609	13	2.	45	7.
V.....	614	611	3	.5	43	7.
VI.....	589	581	8	1.4	49	8.3
VII.....	600	588	12	2.	5	.8
VIII.....	542	529	13	2.4	2	.4
Total	4,891	4,768	123	2.5	330	6.7

(As there are two semesters in each term, each pupil is counted twice. The 123 and 330 represent, respectively, terms lost and terms gained.)

During the school year 1914-15, there were 61 years lost

as against 165 years gained, as shown by Table VI. The excess of years gained over years lost was 104. Hence, the total cost of advancing all the children one grade during the year 1914-15, estimated as for the year 1913-14, was $104 \times \$38.00$ or $\$3,952.00$ less than the cost of keeping them all in school for one year. In all grades during the present year the double promotions represent 6.7 of the total while the failures represent 2.5. For the present year, also, 7 per cent of the first grade failed while 12 per cent were double promoted. In every grade the double promotions were materially in excess of the failures.

Very few pupils can be kept in the elementary school after they are fifteen years of age. This is the age at which they almost invariably leave school, whether they have completed the course or not. If we wish to increase the number completing the elementary school course and thereby swell the number entering the high school, we must get more children through the grades before they reach the age of fifteen.

TABLE VII—Grade distribution in the Boise schools, June, 1911, and June, 1915, reduced to a scale of 1,000 for the first primary grade, and the same ratio maintained for each of the succeeding grades.

Grade	I	II	III	IV	V	VI	VII	VIII
1910-11	1,000	873	764	920	777	842	582	502
1914-15	1,000	742	906	782	888	797	777	811

In 1911, 57 per cent of the pupils were in the first four grades and 43 per cent in the last four grades. In 1915, the primary grades included but 51 per cent of the total while the fourth to the eighth grades, inclusive, contained 49 per cent. The increased proportion of the pupils in the last four grades in the year 1914-15, show that just as the number making slow progress is decreased and the number advancing rapidly is increased, the power of the school to retain the pupils until they have completed the entire elementary school course is correspondingly increased. The proportion of pupils in the eighth grade in June, 1915, was 60 per cent greater than in June, 1911. For every five pupils who in 1911 completed the course, eight children finished the eighth grade in 1915. The adjustment of school machinery to the needs and abilities of

unusually dull children and exceptionally bright pupils has prevented three-fifths of the elimination or leakage.

The teachers of Boise feel, then, that their use of an individual standard for promoting pupils, rather than a uniform standard for an entire grade, has given the following results:

1. The average cost of advancing a pupil in school is somewhat reduced.
2. A larger proportion of the pupils is held in school during entire elementary course.
3. Conditions of efficiency in the lower grades are improved by lessening the congestion there—congestion which means not merely too great numbers, but means also a group of laggards who are an undue drag on the work of the entire grade.
4. Exceptional pupils, both above and below the average, receive more nearly the kind of treatment which is suited to them.

SUPERVISION OF INSTRUCTION.

There are in the public schools of the United States two prevailing systems for supervising instruction in the grades:

1. Supervision by the ward principal, who is the administrative leader in his own district and who is also the supervisor of instruction in his own building.
2. The supervision of instruction is intrusted to those who have no administrative responsibility in any district and are thus released from all administrative control but are held responsible for instruction in a group of buildings.

In Boise the latter method has been adopted. Supervision of instruction for the first four grades for the entire city has been assigned to a primary supervisor, and for the next four grades to a grammar grade supervisor. Specialists have charge of music, art, health, physical education, manual training, and household economics. This is the generally accepted method of directing instruction in these newer school activities. But the Boise method of supervising instruction in the formal and traditional sub-

jects is not so uniformly accepted. It has, however, for a small system of schools some distinct advantages. There are in Boise two buildings with sixteen teachers, each, two with twelve, one with ten, one with seven, one with six, and two with four, each. No group of teachers in any district is large enough, economically, to occupy all the time of an efficient principal in problems of school control and instruction. Hence the ward principal method of supervision of instruction would demand that the principal of the building should devote a part of his time to teaching, a part to problems of school management, and a part to supervising instruction. His energies are therefore so dispersed that he is not likely to be thoroughly effective in any field. But with an efficient corps of teachers, each assuming the responsibilities for solving her own problems of school management, the principal may devote all his time in school hours to instruction and dispose of problems of control in out-of-school hours. The extra salary paid the principal may procure exceptional teaching ability, and may legitimately be charged to instruction because the talent it purchases is devoted to a superior quality of teaching. The Boise system of organization thus permits even a small city to employ two thoroughly trained supervisors of instruction without devoting too great a proportion of its funds to supervision. But the low cost of this system is not its chief merit. The two supervisors being relieved from all responsibility for school management and teaching, not being immersed in the day to day routine problems of the school building and the classroom, may devote all their thought, all their skill, and all their energy to the one aim,—improvement of the results of instruction. The two grade supervisors and the principal of the high school in co-operation with the superintendent determine what ideals and aims shall unify and vitalize instruction throughout the entire system. The same agents organize the machinery and devices for the realization of the policy agreed upon and test the results of that policy as they are achieved. Should nine ward principals, absorbed in problems of control, management, and class instruction, attempt to formulate policies of instruction, and direct their execution, the result would be a loss of

unity and efficiency. All the teachers of a given grade being under the same supervisor, the same standard of achievement is required of all and the same tests are applied to determine the relative efficiency. The stimulating effect of this is marked. If there be a laggard in the force, the fact is soon apparent not only to the supervisor but to all the other teachers. If there is inefficiency anywhere, that, too, is soon known everywhere. Everyone is thus kept up to her maximum ability, not by any offensive and individual pressure, but by standards applied to the results achieved by all workers in the same field. Such standards are never unfair and offensively personal. Were there nine supervisors of the same grade, there would be nine standards whereby to estimate efficiency.

The argument is sometimes advanced that the application of a uniform standard tends to grade down as well as up, to reduce all to the dead level of uniformity rather than to stimulate individual initiative. This is surely not true in the Boise system of supervision. Individual initiative and exceptional achievement by any teacher in a given grade not only meets with the commendation of the supervisor but is brought to the attention of the other teachers of the same grade. One of the methods used to this end is that of assembling all the teachers of a given grade to observe the work of exceptional merit. Distinctive achievement is, therefore, rewarded by exceptional educational prominence. If the system of supervision of instruction by ward principals were in operation, exceptional merit could not be so quickly determined and rewarded.

The advantages of the system of supervision of instruction for the grades adopted in Boise may be briefly summarized as follows: It relieves the supervisors of instruction from all duties of school management; it is effective in producing co-ordination and continuity throughout the system; it clarifies aims and hastens their realization; it creates uniform standards and applies uniform measures of achievements; and it stimulates and rewards individual initiative.

ENGLISH IN THE ELEMENTARY SCHOOL.

During a period covering the last six years an investigation and an experiment in the improvement of English usage and the mechanics of English have been carried on in the elementary schools of Boise in an effort to define our situation and to find a more exact means of measuring and a more satisfactory method of improving it.

A. AN INVESTIGATION IN ENGLISH USAGE.

In an attempt to get an effective method of dealing with the common errors in English speech the teachers in the elementary school were asked to observe with care for a given period the mistakes in the use of English which their pupils made in conversations on the playground, in the schoolroom, and in recitation. The teachers then listed these errors and reported.

The lists of this first report were collated and classified. When classified the fact which stood out most clearly was that the multitudinous errors in speech are due to the frequent repetition of a few incorrect forms. Practically all the errors reported could be classified under six heads; namely, verb errors, double negatives, mispronunciations, misuse of pronouns, adverb errors and colloquialisms. Mispronunciations in this classification includes those which may properly be called language errors, as "jist" for "just," "git" for "get," "ketch" for "catch," and others of a like nature and does not include mispronunciations due to unfamiliarity with a word. In this effort there was no attempt to deal with the fine points, the niceties of speech. Only the gross and glaring crudities of English were considered.

In detail, this classification was as follows:

1. Verbs:

- a. Past and perfect participle confused.
- b. Misuse of had and got, use of ain't.
- c. Agreement with subject in number; e. g., "He don't."
- d. Sequence of tenses.
- e. Uses of shall and will.

- f. Use of "and" with infinitive; e. g. "try and go."
2. Double negatives.
3. Pronunciations—Just, get, final g, for, asked, February, height.
4. Pronouns:
 - a. Case forms:
 - (1) In compound subject.
 - (2) Object of preposition or verb.
 - (3) After copula.
 - (4) In compounds; e. g., "themselves."
 - b. Pronoun used for adjective; e. g., "them books."
 - c. In double subjects; e. g., "John he did the work."
 - d. Indefinite reference.
5. Adverbs:
 - a. Use of adjective for adverb.
 - b. This here, that there, etc.
6. Colloquialisms, provincialisms:

"Lots" for many or much; "mad" for angry; "learn" for teach; "get" with infinitive, as, "get to go;" "like" as a conjunction, as, "He felt like he could do it;" introductory "well," "why," "now," "so."

This outline was given to the teachers and they were asked to watch for errors on these points for a given time and report again. This second report specified the errors noted under each head of the outline and recorded also the comparative frequency of occurrence. When these reports were collected and tabulated it was possible to tell what our situation was. As yet, no scientific exactness can be claimed for the results obtained in this way. Though there was not scientific accuracy in obtaining the data, there is such a uniformity of results in the reports as to justify certain conclusions.

TABLE I—*Classification of errors.*

Grades	1	2	3	4	5	6	7	8	Total
1 Verbs	49.5	48.1	32.8	34.0	40.9	43.7	37.0	36.6	40.1
2 Double negatives.....	3.6	3.3	3.2	3.2	3.7	3.3	3.2	2.9	3.4
3 Pronunciation.....	16.0	18.1	21.8	22.5	16.6	21.6	24.7	17.3	20.4
4 Pronouns	18.8	17.1	16.8	17.2	19.3	14.9	14.9	18.3	17.2
5 Adverbs	5.5	4.7	5.8	6.1	6.4	5.2	5.8	6.9	5.8
6 Colloquialisms, etc.....	8.2	7.0	14.9	14.8	12.9	11.5	12.3	18.3	12.9

Table I shows the percentages of errors in each grade that are due to each of the six classes of mistakes. Of the total errors reported from the eight grades 40.1 per cent are verb errors, 3.4 per cent are double negatives; mispronunciations cause 20.4 per cent, the misuse of pronouns 17.2 per cent, adverb errors 5.8 per cent, and colloquialisms 12.9 per cent. According to these totals over sixty per cent of the errors are due to misuse of verbs and mispronunciations.

The most disconcerting feature of the table is disclosed by a consideration of the percentages by grades. Verbs cause the following percentages of the total errors: First grade 49.5, second grade 48.1, third grade 32.8, fourth grade 34.0, fifth grade 40.9, sixth grade 43.7, seventh grade 37.0, and eighth grade 36.6. Mispronunciations for the eight grades in order run as follows: 16.0, 18.1, 21.8, 22.5, 16.6, 21.6, 24.7, 17.3. The percentages for misuse of pronouns for the grades in order are 18.8, 17.1, 16.8, 17.2, 19.3, 14.9, 14.9, 18.3. On these last two the record for the first and eighth grades are nearly the same, with but slight variation in the grades between. Double negatives run with even less variation as follows: 3.6, 3.3, 3.2, 3.2, 3.7, 3.3, 3.2, 2.9. The total variation on this point is only eight-tenths of a per cent. The first grade records 3.6, the seventh 3.2, but the eighth grade drops to 2.9. On adverb errors the evidence is nearly the same but the eighth grade percentage of error is higher than that of the first or second grade. This may be due in part to greater exactness of the eighth grade teachers in scoring, their teaching of technical grammar making them keener to note this point, and in part to the fact that the upper grade pupils use more modifying elements in their sentences than the

younger children and consequently they have more frequent opportunity for error. On colloquialisms the record of an increasing percentage of error in the higher grades is due to more exacting standards on the part of upper grade teachers in noting these errors: The primary grades recorded chiefly the use of "lots" for "many," "mad" for "angry," "learn" for "teach," some provincial perfect tense forms, and the use of unnecessary introductory words as "well," "why," "now," "so." The higher grades record a much greater variety of errors as "in" for "into," "between for "among," "without for unless," "go to" for "intend to," "took and," "went and," "kind of," "what for" instead of "why," "guess" for "think," "can" for "may;" use of superlative for comparative degree, "at" as in "Where is it at?" "yet these expressions are not restricted in their use to the grammar grades.

When the investigation had progressed this far, two points were especially prominent. The first period of observation disclosed the fact that the great mass of English errors fall readily into six classes. The tabulation of the results of the second period of observation showed that the percentage of error due to these causes was relatively constant or increased slightly through the grades.

TABLE II—*Distribution of verb errors.*

Grades	1	2	3	4	5	6	7	8	Total
1 Perfect participle	52.8	47.3	45.0	48.3	44.7	48.3	59.6	47.3	48.8
2 Use of "ain't" and misuse of "had" and "got"	22.2	18.8	21.0	22.9	22.4	19.8	15.8	18.9	20.4
3 Lack of agreement with subject in number	7.4	7.9	10.0	9.2	9.2	7.7	8.8	8.4	8.2
4 Sequence of tenses	1.8	.9	4.0	1.1	3.8	4.4	.....	4.0	2.6
5 Misuse of "shall" and "will"	2.8	6.9	3.0	4.6	7.9	6.6	7.0	6.7	5.4
6 Use of "and" with infinitive for "to"	5.5	4.9	8.0	4.6	5.2	5.5	3.5	8.1	5.7
7 Colloquialisms, etc.	7.4	12.8	9.0	9.2	6.6	7.7	5.2	9.4	8.6

Verb errors causing 40.1 per cent of the total errors reported, they were further tabulated. Table II shows the distribution of verb errors in the seven classes of errors reported. Of the total of verb errors almost fifty per cent, 48.8 per cent, are due to confusion of past and perfect participle forms and this percentage is comparatively con-

stant throughout the grades. To this fifty per cent of verb errors may be added twenty per cent, again relatively uniform throughout the grades, due to the use of "ain't" and the misuse of "had" as in "had ought," and of "got" as in "have got." This makes seventy per cent of the verb errors or almost thirty per cent of the total errors heard from our pupils due to confusion of past and perfect participle forms, the use of "ain't," and the misuse of "had" and "got." Lack of agreement with the subject in number totals 8.2 per cent of the verb errors, and colloquialisms in the use of verbs, as "get to go," "try and see" for "try to see," etc., total 8.6 per cent.

The report from each teacher showed the score on the verbs she heard misused. On combining these reports it was found that a very few verbs cause the majority of the errors. Each verb reported by a number of the teachers was scored separately and all others were combined. This tabulation showed that thirteen verbs cause 85.1 per cent of all the errors in past tense and perfect participles reported and of these thirteen, four verbs, see, do, come, go, caused 51.8 per cent of the errors.

TABLE III—Percentage of errors in past tense and perfect participles classified.

Grades	1	2	3	4	5	6	7	8	Total
see	14.0	14.6	22.2	21.4	17.6	15.9	14.7	14.2	16.8
come	12.2	8.3	11.1	16.6	8.8	9.1	8.8	5.7	10.3
do	12.2	12.5	15.5	19.0	17.6	13.6	11.7	17.1	14.7
go	7.0	12.5	13.3	7.1	8.8	13.6	8.8	8.6	10.0
run	7.0	8.3	6.6	0.0	5.8	6.8	8.8	8.6	5.9
sit	7.0	6.3	2.2	9.5	5.8	6.8	0.0	0.0	5.0
break	5.2	2.1	0.0	0.0	2.9	0.0	0.0	5.7	2.0
lie	7.0	2.1	2.2	7.1	8.8	4.5	2.9	0.0	4.4
give	3.5	6.3	6.6	2.4	5.8	6.8	2.9	0.0	4.4
begin .....	.0	4.1	2.2	0.0	2.9	9.1	5.8	5.7	3.5
ring .....	.0	4.1	4.4	2.4	0.0	4.5	0.0	8.6	2.9
take .....	.0	2.1	4.4	2.4	5.8	2.3	0.0	0.0	2.0
write .....	.0	2.1	2.2	2.4	8.8	4.5	2.9	5.7	3.2
all others	24.5	14.5	6.6	9.5	0.0	2.3	32.3	25.7	14.4

Thus far in our attempt we had only defined our situation. Up to this time the task of correcting English had seemed huge and indefinable, there seemed so many errors, and each pupil had his own list of difficulties. He did not know just what they were and the teacher did not know. Maybe he did not know of a single error he was making, maybe the teacher could mention several as belonging to a given pupil and maybe she could only say

that she heard such and such errors in her room but that she felt there were many others. Yet, by this tabulation, the great majority of the errors fell easily into six classes.

Before proceeding to remedies for the situation it was desirable to get a record of individual status with regard to these points in order to measure progress. To get a record on all these points would not be impossible but it would take much time to secure it so it was decided to obtain the standing of the pupils on a part of the points only. For the first four grades the pupils were scored on their use of the verbs see, come, do, and go, and the next four grades, in addition to these, were scored on the use of ain't, the misuse of had and got, double negatives, mispronunciations, misuse of pronouns and adverbs. Each teacher prepared a card bearing the names of her pupils down the left hand side followed by columns labeled with the various errors. The teacher then tried by a conversation with the individual, carried on in a rather free and easy, unstilted fashion, on the playground or in study period, to get each pupil's record on these points for five uses of the point she was scoring. The teacher's attempt was to get the record without the pupil suspecting her aim. These records were completed comparatively early in the second year's work on English usage. Upon the completion of the records the teacher conferred with the individual over his status and the pupil then knew for the first time just how frequently he was apt to make certain mistakes and he could the more intelligently correct himself. Varying exercises for drill on correct forms were devised and used throughout the year and the pupils were encouraged in every way to greater alertness in eliminating their own mistakes on the points scored and on others.

In June the pupils were tested a second time according to the former plan and a very striking improvement was indicated. But there were several factors which operated to make the figures unreliable as an exact measure of progress. In the first place, it was impossible to obtain the second record without the pupil's realizing the purpose so they were careful in the expressions used. At the close of the first semester most of the classes passed to a different teacher so that the conditions of giving the second test probably varied from the first one to some extent. Some

few teachers obtained their second record by means of written work. As written work is more studied than oral such records were unsatisfactory. Despite these factors which tended to make the figures an inexact measure of progress, the evidence of marked gains were indisputable.

Owing to the fact that tests along different lines were undertaken during the next year, no attempt was made to obtain each pupil's record on the points investigated, but each teacher had the previous year's record for her pupils and the different points in the list were assigned to the various grades for especial corrective drill. Subsequent work has followed substantially this plan and the definite field of attack has rendered the corrective work more intelligent and more effective than formerly.

B. THE MECHANICS OF ENGLISH.

In the past five years there has been developed a plan for measuring the success of the teaching of formal English. In the first two years of this period each teacher's program provided for five English lessons each week. This term included story-telling, dramatization, correction of errors in English usage, above the third grade a written lesson each week with correction of errors, and the teaching of points outlined:

Elementary Language.

FIRST GRADE—

- I. Capitals: 1, beginning of sentence; 2, proper names.
- II. Punctuation, period at end of sentence.

SECOND GRADE

- I. Capitals: 1, beginning of sentence; 2, proper names; 3, Mr., Mrs., Miss, I.
- II. Punctuation: 1, period at end of sentence; 2, question mark. (Teacher give correct form when required.)

THIRD GRADE—

I. Capitals: 1, names of days and months; 2, abbreviations of names of days and months; 3, names of persons and places.

II. Punctuation: 1, question mark; 2, period.

FOURTH GRADE—

I. Capitals: 1, initials; 2, direct quotations; 3, names of Deity and Bible; 4, every line of poetry.

II. Punctuation: 1, exclamation point; 2, quotation marks and comma in direct quotations; 3, comma after name of person addressed; 4, apostrophe to denote possession. (Teacher distinguish between singular and plural form when occasion requires).

III. Heading of papers.

IV. Paragraph and margin.

V. Friendship letters.

FIFTH GRADE—

I. Punctuation: 1, comma in a series; 2, apostrophe in contractions, in possessive, singular and plural; 3, hyphen in word separated at end of line.

II. Paragraph, margin.

III. Simple business letters, order for papers, etc.

SIXTH GRADE—

I. Punctuation, comma in appositive expressions and interjected expressions.

II. Business letters.

III. Longer orders.

IV. Applications for positions.

V. Answers to advertisements.

SEVENTH GRADE—

I. Invitations and answers.

II. O, oh.

EIGHTH GRADE—

1. Simple compositions, maximum of one page, for testing command of language, and correct use of punctuation marks.

After the use of this outline for two years, an exercise formulated by the head of the English department* of the high school was used to test accuracy in the mechanics of writing a simple passage in English. This test was given early in the first term of the school year 1911-12 in all the grades above the third in the elementary schools and throughout the high school. Another test of a similar nature was given just before the close of the first semester and a third was given near the end of the school year. These three tests were prepared by the same person and were given according to exact directions.

First Test, Given in September, 1911.

Two pots had been left on the bank of a river, one of brass, and one of earthenware. When the tide rose they both floated off down the stream. Now the earthen pot tried its best to keep aloof from the brass one which cried out: "Fear nothing, friend, I will not strike you." "But I may come too close to you," said the other, "and whether I hit you, or you hit me, I shall suffer for it."

Directions to Dictator.

1. Read entire fable to class once.
2. Read sentence 1 twice. Give signal, "Write."
3. Read sentence 2 twice, etc.
4. Read sentence 3 to colon twice,.....etc.
5. Complete the reading of sentence 3, etc.
6. Read sentence 4 to "and whether," etc.
7. Complete sentence 4, etc.

Directions for Marking.

Capitals.	Punctuation.	Spelling.
1-3. Beginning of sentences 2, 3, 4.	1. Colon (sentence 3).	1. two, to, too.
4. Fear, (sentence 3).	2-3. Commas before and after friend.	2. earthenware.
5. I (sentence 4).	4-5. Commas before and after said the other.	3. tide.
	6. Quotation marks (sentence 3).	4. floated.
	7-10. Quotation marks (sentence 4).	5. its.
		6. tried.
		7. aloof.
		8. one.
		9. which.
		10. whether.

* Prepared by Miss Katherine Forster as part of a study which she made for the English Department of the University of Chicago.

*Third Test, Given in May, 1912.**"The Fox and the Goat."*

Once a fox fell into a well and could not get out. A goat coming by asked the fox what he was doing down there. "I am drinking this sweet water," said the fox. "Come down and try some." When the goat jumped down the fox sprang upon the goat's back and leaped out. The goat called, "How am I to get out?" "You should have thought of that before you got in," replied the fox.

The directions to dictator were similar to those in Test 1.

Directions for Marking.

Capitals.	Punctuation. . . .	Spelling.
1. A goat. . . .	1. Period after "there."	1. could.
2. When the . . .	2-3. Quotation marks, "I . . . water".	2. coming.
3. The goat . . .	4. C o m m a a f t e r "water".	3. there.
4. How am . . .	5. Period after "some".	4. water.
5. I to get out?	6. A p o s t r o p h e in "goat's".	5. some.
	7. Period after "out".	6. sprang.
	8. Comma after "called".	7. leaped (or jumped).
	9. Quotation marks "How . . . out?"	8. called.
	10. Question mark after "out".	9. thought.
		10. replied.

For convenience in marking, the papers were ranked on five points in capitalization, ten in punctuation, and ten in spelling, making a total of twenty-five points, each receiving four per cent. Each point selected was chosen as a fair test of ability to use the mechanics of writing English.

TABLE IV—Percentages made by grades in the dictation tests for September, 1911, and May, 1912.

Grade	Capitals		Punctuation		Spelling		Average		Gain
	Sept. 1911	May 1912	Sept. 1911	May 1912	Sept. 1911	May 1912	Sept. 1911	May 1912	
4B	77	81	4	54	33	79	38	71	33
4A	79	84	11	60	42	84	44	76	32
5B	82	86	21	68	55	85	53	78	25
5A	79	87	19	72	56	87	51	83	32
6B	79	87	32	79	64	88	58	84	26
6A	80	91	43	84	76	90	66	88	22
7B	83	90	52	84	75	92	70	88	18
7A	90	91	61	84	79	93	77	89	12
8B	91	94	61	88	81	93	78	91	13
8A	91	95	62	89	84	95	79	93	14

Table IV shows the percentage made by each class in capitalization, punctuation, spelling, and their average. The grades recorded on any one line for September and May were not made by the same pupils but by the first and second term classes of a given grade.

The most striking record in the first test is that in punctuation. The percentages are very low, despite the fact that for over two years the pupils had been taught formal points according to an outline arranged definitely and progressively. As compared with the grades in punctuation, those for capitalization are fairly satisfactory. The very poor records in spelling were caused chiefly by the "to, too, two" combination, by "which," which has the record for being misspelled more than any other word* in the language, by "whether" and "its."

After this first test, more definite work in teaching the use of mechanical points was given in each grade throughout the year, with especial stress on the use of the question mark and period at the end of the sentence, the punctuation of a divided quotation, the exclamation mark, and capitals for the beginning of a sentence, of a direct quotation, and of a proper name. Table IV shows the percentages attained after the year's work along these lines and the average gain made by each class. The greatest gains are in punctuation but the gains in the average of the capitalization, punctuation, and spelling are marked also. In the first test, that for September, 1911, the average standing ranged from 38 per cent in the 4B to 79 per cent in the 8A, a difference of 41 per cent. In the test at the end of the year the lowest standing was 71 per cent in the 4B and the highest was 93 per cent in the 8A, a range of 22 per cent. The greatest gains were made in the fourth and fifth grades and the least in the seventh and eighth grades which accounts for the decrease in the range of percentages attained. The average gain for the year was 22.7 per cent. This is practically the gain of the sixth grade. The greatest gains were attained by the lower grades because, as their first grades indicate, there was a greater chance for improvement. The law of diminishing returns may account, in part, for the relatively small

* Concrete Investigation of the Material of English Spelling by Franklin W. Jones, University of South Dakota Publication, page 22.

gains in the seventh and eighth grades; and the fact that grammar is introduced in the middle of the seventh year and the number of lessons in composition is, at that time, reduced from five to three a week will account for a part of the decrease.

This year's work demonstrated clearly that our previous work had not produced habits of correctness and accuracy in writing English, and that the additional stress on mechanical points through frequent dictation and other exercises did increase precision in writing. Therefore, it was decided to continue the use of such exercises with periodical tests of a similar nature.

Since that time a test has been given at the beginning and the close of each semester. The tests given near the end of the semester furnish a fair estimate of the work accomplished.

In 1912 the test given was:

"The Lamp and the Sun."

December, 1912.

Once a lamp stood in a window and looked at the setting sun. "You are a pretty little fellow," he said to the sun, "but I have a clearer, finer, brighter light than you have." "Puff!" said the wind, and out went the light. As the mistress of the house kindled the flame again, the wind whispered, "Perhaps you'll now hold your peace. The sun and the stars do not need to be kindled as you do."

Directions to Dictator.

1. Read entire story to class once.
2. Read sentence 1 twice. Give signal, "Write."
3. Read entire sentence 2. Reread to "but I have."
Give signal to write.
4. Read remainder of sentence 2. Give signal, "Write."
5. Read sentence 3 twice. Give signal, "Write."
6. Read entire sentence 4. Reread to "and the wind."
Give signal, "Write."
7. Read remainder of sentence 4. Give signal, "Write."
8. Read last sentence twice. Give signal, "Write."

Directions for Marking.

Grade papers without correcting them. Let the first mark be for capitals, the second for punctuation, the third for spelling. The marks should represent the number of points that are correct. Enter grades on record sheet with grades of September dictation so that each pupil may keep track of his own gains.

Capitals.	Punctuation.	Spelling.
1. You are a	1. Quotations marks	1. lamp.
2. Puff	around "You ..	2. sun.
3. As the mistress	.. fellow".	3. fellow.
4. Perhaps	2-3-4. Commas after "fel-	4. brighter.
5. The sun	low", "s u n",	5. went.
	"clearer".	6. mistress.
	5. Quotation marks	7. flame.
	around "but ..	8. again.
	.. you have".	9. whispered.
	6. Exclamation point	10. perhaps.
	after "Puff".	
	7. Quotation marks	
	around "Puff".	
	8. C o m m a a f t e r	
	"again".	
	9. A p o s t r o p h e	
	in "you'll".	
	10. P e r i o d a f t e r	
	"peace".	

For comparison of standings of two consecutive years the test of 1913, "The Fox and the Cat," was given in 1914.

"The Fox and the Cat."

December, 1913 and 1914.

A sly, clever fox was boasting to a cat of his tricks. "I have a whole bag of tricks," he said, "which contains a hundred ways of escaping my enemies." "I've only one," said the cat, "but it has always served me." At that moment they heard the cry of a pack of hounds coming toward them. The cat's plan was simple. She ran up a tree and hid herself among the leaves. Then she cried, "What can you do, Mr. Fox? Search well through your bag of tricks." The fox tried all his hundred tricks, but the hounds caught him at last.

Directions to Dictator.

1. Read entire story to class once.
2. Read sentence 1 twice. Give signal, "Write."
3. Read entire sentence 2. Reread to "which." Give signal, "Write."
4. Read remainder of sentence 2. Give signal, "Write."
5. Read the rest (except the last sentence) a sentence at a time, reading each sentence twice before giving signal to write.
6. Read entire last sentence. Reread to "but the hounds." Give signal, "Write."
7. Read remainder of last sentence. Give signal, "Write."

Directions for Marking.

Capitals.	Punctuation.	Spelling.
1. I have a	1. Comma after "sly"	1. boasting.
2. At that moment	2. Quotation marks around "I . . . tricks".	2. whole.
3. What	3. Quotation marks around "which . . . enemies".	3. which.
4. Mr.	4. Apostrophe in "I've".	4. hundred.
5. Fox	5. Comma after "one".	5. moment.
	6. Apostrophe in "cat's".	6. coming.
	7. Period after "leaves".	7. simple.
	8. Comma after "cried".	8. cried.
	9. Period after "Mr."	9. search.
	10. Interrogation point.	10. caught.

TABLE V—A comparison of standings in percentages in dictation of fables near the end of the first semester (December) for the years 1912, 1913, 1914.

Grade	Capitals			Punctuation			Spelling			Average		
	1912	1913	1914	1912	1913	1914	1912	1913	1914	1912	1913	1914
4B	70	80	88	31	63	73	52	53	59	51	66	73
4A	77	83	89	21	73	82	43	64	71	47	73	81
5B	75	85	90	55	75	82	53	74	78	61	78	83
5A	70	88	93	56	79	89	54	79	88	60	82	90
6B	81	85	93	69	79	90	59	85	89	70	83	91
6A	71	87	94	60	82	90	57	85	92	63	85	92
7B	81	85	92	76	81	92	74	93	93	77	87	92
7A	85	92	96	77	86	92	77	94	96	79	91	95
8B	86	92	96	80	84	94	80	96	96	82	91	95

Table V shows the continuous gains made by any grade from year to year as the work continued. For any grade above 4B, the gains are of a cumulative nature as the work is done by the pupil for an increasing length of time. But formal writing in English is first stressed in the 4B term and a comparison of grades made by succeeding 4B classes shows the constructive value of the work. The 4B class for the first term of 1912 attained a percentage of 70 in capitalization, the 4B class for 1913 a percentage of 80, and the 4B class for 1914 a percentage of 88. The same classes, in punctuation, ranked 31, 63 and 73 per cent, respectively, and their averages were 51, 66, and 73 per cent. The same test having been given in 1913 and 1914, the gains for any grade for that year are a very accurate measure of progress over the previous year. The 4B class of 1914 gained, over the class of 1913, 8 per cent in capitalization, 10 per cent in punctuation, and 7 per cent in their average standing. Similar gains are made by the other classes with the least gains in grades seven and eight as shown in Table IV for the first year's work; thus the 6B classes show a record of 81, 85, and 93 per cent in capitalization, of 69, 79, and 90 per cent in punctuation, and of 70, 83, and 91 per cent in their average standing, while the 8B classes for the same years have 86, 92, and 96 per cent in punctuation, and they averaged 92, 91, and 95 per cent. The total gain of all the classes in capitalization was 54 per cent, in punctuation 82 per cent, in spelling 39 per cent.

Each Class Traced Through Three Years.

The 4B of 1912 as 5B of 1913 showed a gain of 15 per cent in capitalization, 44 in punctuation, 22 in spelling, and 27 in average; as 6B in 1914, their gain over the previous year was 8 per cent in capitalization, 15 in punctuation and 15 in spelling—an average of 13 per cent.

The 4A of 1912 as 5A of 1913 showed a gain of 11 per cent in capitalization, 58 in punctuation, 36 in spelling, and 35 in average; as 6A in 1914 they showed a gain over the previous year of 6 per cent in capitalization, 11 in punctuation, 13 in spelling and 10 in average.

The 5B of 1912 as 6B in 1913 showed a gain of 10 per

cent in capitalization, 24 in punctuation, 32 in spelling, and 21 in average; as 7B in 1914 their gain over the previous year was 7 per cent in capitalization, 13 in punctuation, 8 in spelling, and 9 in average.

The 5A of 1912 as 6A in 1913 showed a gain of 17 per cent in capitalization, 26 in punctuation, 31 in spelling, and 25 in average; as 7A in 1914 they showed a gain over the previous year of 9 per cent in capitalization, 10 in punctuation, 11 in spelling and 10 in average.

The 6B of 1912 as 7B in 1913 showed a gain of 4 per cent in capitalization, 12 in punctuation, 34 in spelling and 17 in average; as 8B in 1914 their gain over the previous year was 11 per cent in capitalization, 13 in punctuation, 3 in spelling, and 9 in average.

Characteristics and Grading of the Dictation Test.

To afford a standard each test must present, as nearly as possible, material of the same character and must be marked on the same points. It should deal with a situation, the meaning of which is clearly apparent, and should present ideas with which pupils are reasonably familiar.

A consideration of the points marked under capitals will disclose a change to include the common uses. It was found that there is no occasion for marking capital "I" as mistakes in its use are negligible. Of the five points under capitals, two are for capitals at the beginning of sentences, one for beginning a direct quotation, one for a title, "Mr." or "Mrs.," and one for a name, as "Lion," "Fox."

In marking on punctuation, the exclamation point has been dropped as irrelevant to the written composition of the elementary school. The interrogation point, a mark of greater difficulty, is included because of frequent necessity for its use. Of the ten points under "Punctuation," two are on the period: at the end of a sentence, for the abbreviation of a title (Mr. or Mrs.); one for an interrogation point; two for the apostrophe: in a contraction, for possessive; three for the comma: to set off a noun of direct address, after the first part of a broken quotation, in a series; two for quotation marks: the first part of a broken quotation, the second part of a broken quotation.

The words of the selection should be reasonably easy to spell. The ten words upon which the test is marked should be of approximately the same difficulty in any series of tests.

TABLE VI—Average of the standings made at the end of the semester during the years 1911-1914.—Seven tests.

Grade	Capitals	Punctua- tion	Spelling	Average
4B	80	54	62	65
4A	83	61	68	70
5B	83	69	75	75
5A	87	73	78	80
6B	86	78	80	80
6A	86	79	82	82
7B	86	82	87	85
7A	89	84	90	88
8B	91	86	91	91

Table VI presents the averages of the standings made at the end of the seven successive semesters during the years 1911 to 1914, inclusive. The per cents in the "Average" column show a regular increase of 5 per cent for each half year's work up to the 6B. Above the 6B the gain is, with one exception, 3 per cent. The percentages in spelling and in punctuation show substantially the same results as Tables IV and V, that is, the greatest gains in grades four and five, and less, but rather regular, gains in the seventh and eighth grades. The averages for capitalization present too slight a range to be satisfactory. The lower grades ranked much higher in capitalization than in punctuation at the beginning of this series of tests and they have raised their percentages in both to a marked degree, but the upper grades have not improved in capitalization to the same degree that they have in punctuation so that, while they have gained somewhat, their averages are not as high as one would anticipate.

This investigation has been conducted in too limited a field and has covered too short a period of time to justify any definite conclusion as to the percentages which the grades should attain in the mechanics of English, but the

results so far obtained justify the work already done and its continuation. The justification for the work is evidenced not alone in the improvement in this one line of work but also in a greater accuracy in the other written work of the pupils and in the increased ability of the pupils to correct their own errors though there has, as yet, been no attempt to measure the degree of improvement on these two points.

As a result of these investigations in English usage and in the mechanics of English, we have narrowed the field and thus made our attack more direct. The issue has been more clearly defined for both teachers and pupils and the gains, though not measured exactly in English usage and not altogether satisfactory in either line, are clearly marked and have repaid the effort expended.

THE COURTIS STANDARD TEST IN ARITHMETIC.

The Curtis Standard Test in Arithmetic*, Series A, was given in Boise first in October, 1911. Table I shows that at that time the standings of the grades in the Boise schools in the first five tests was at the standard or a few points below it. But in the remaining three tests, No. 6, Speed Reasoning; No. 7, Fundamentals; No. 8, Reasoning, while the number of problems attempted was at the standard, or a few points below, with two exceptions, the standing of all the grades was at the standard or a few points above it, showing a higher percentage of accuracy than the standard.

* The Curtis Standard Tests, copyrighted by S. A. Curtis and issued by the Department of Cooperative Research, 82 Elliot Street, Detroit, Michigan.

TABLE I.

	No.1	No.2	No.3	No.4	No.5	No. 6		No. 7		No. 8	
	Addition	Subtraction	Multiplication	Division	Copying figures	Reasoning		Fundamentals		Reasoning	
						Ats.	Rts	Ats.	Rts	Ats.	Rts
<i>Standard—3d Grade</i>	26	19	16	16	63	.....	...	.....	...	.....	...
Boise, Oct., 1911.....	24	16	13	13	56	.....	...	.....	...	.....	...
Sept., 1914.....	23	14	.....	.....	53	.....	...	.....	...	.....	...
Jan., 1915.....	33	24	21	21	79	.....	...	.....	...	.....	...
<i>Standard—4th Grade</i>	34	25	23	23	75	3.5	1.8	7.0	3.5	2.9	.7
Boise, Oct., 1911.....	36	25	23	20	74	4.2	2.6	7.0	3.7	.....	.....
Sept., 1914.....	34	23	20	19	74	2.9	1.2	5.3	2.7	.....	.....
Jan., 1915.....	43	34	34	32	92	4.2	2.5	7.9	5.1	.....	.....
<i>Standard—5th Grade</i>	42	31	30	30	84	4.2	2.6	9.0	5.2	3.1	1.0
Boise, Oct., 1911.....	40	31	29	27	81	3.8	2.9	8.6	5.3	2.6	1.1
Sept., 1914.....	42	30	31	27	88	3.8	1.9	7.8	5.3	2.5	.7
Jan., 1915.....	46	38	37	37	97	4.2	3.2	8.9	6.5	3.5	1.2
<i>Standard—6th Grade</i>	50	38	37	37	92	4.9	3.5	11.0	6.7	3.4	1.4
Boise, Oct., 1911.....	49	37	34	36	92	4.6	4.1	10.5	6.6	3.0	1.6
Sept., 1914.....	46	35	35	35	98	4.1	2.9	9.3	6.6	2.5	1.2
Jan., 1915.....	53	44	42	44	106	5.3	4.7	10.3	8.8	3.7	2.3
<i>Standard—7th Grade</i>	58	44	41	44	100	5.6	4.5	12.5	8.2	3.7	1.9
Boise, Oct., 1911.....	56	43	42	42	104	5.4	4.8	12.6	8.2	3.8	2.4
Sept., 1914.....	56	44	43	44	109	4.8	3.9	11.0	7.7	3.1	1.9
Jan., 1915.....	63	50	51	51	117	6.3	5.8	12.0	8.8	4.3	3.3
<i>Standard—8th Grade</i>	63	49	45	49	108	6.4	5.7	14.0	9.4	4.0	2.5
Boise, Oct., 1911.....	61	46	44	45	107	6.5	5.8	14.3	9.6	4.3	3.0
(8B) Sept., 1914.....	63	45	47	49	116	5.8	5.2	12.4	9.0	3.7	2.3
(8B) Jan., 1915.....	65	50	52	53	122	7.4	7.0	13.4	10.2	5.2	4.1

After the first trial, drills were given in the first five tests with the aim of increasing the speed. All grades responded readily with a gain of one or more years over their standard. In this period we verified Mr. Courtis' statement that there is no correlation between Tests 1, 2, 3, 4, and Tests 6, 7, 8. Accordingly, we have discontinued drill in the first four tests, except in grades three, four, and five. In grades six, seven, and eight, we have worked definitely for speed and accuracy in reasoning and fundamental operations.

Table I shows, also, the gain in one semester. The tests were given at the beginning of the semester, September, 1914, and at the close, January, 1915. In the third grade, (pupils who had had only one year's work in primary combinations in addition and separations in subtractions) the standings were 3 below the standard in ad-

dition and 5 in subtraction. In January, they ranked 7 above the standard in addition, and 5, each, in subtraction, multiplication and division. The fourth grade in September was at the standard in addition, 2 below in subtraction, 3 below in multiplication, and 4 below in division. In January, it was above the fifth grade standard in all the first four tests. In September, the fifth grade was at the standard in addition, 1 below in subtraction, 1 above in multiplication and 3 below in division. In January, it was 4 above in addition and sixth grade standard in subtraction, multiplication and division. In September, the sixth grade standing was 4 below the standard in addition, 3 in subtraction, 2 in multiplication and 2 in division. In January, it was 3 above the standard in addition, and at or above seventh grade standards in subtraction, multiplication and division. In September, the seventh grade was 2 below the standard in addition and at or above the standard in subtraction, multiplication, and division. In January, it ranked at eighth grade standard in addition, 1 above eighth in subtraction, 6 above in multiplication and 2 above in division. In September, the eighth grade was at the standard in addition and division, 4 below in subtraction and 2 above in multiplication. In January it ranked from 1 to 7 above the standard.

On Test No. 6, Speed Reasoning: In September, the fourth grade was .6 of a problem below the standard, in January, .7 above; in September, the fifth grade was .7 below; in January, .6 above; in September, the sixth grade was .6 below, in January, 1.2 above; in September, the seventh grade was .6 below, in January 1.3 above; in September, the eighth grade was .5 below, in January 1.3 above. At the beginning of the semester they were from .5 to .7 below the standard and at the end of the semester they showed gains of from .6 to 1.3 problems.

On Test No. 7, Fundamentals: In September the fourth grade was .8 of a problem below the standard, in January 1.6 above; in September the fifth grade was .1 above the standard, in January 1.3 above; in September the sixth grade was .1 below the standard, in January 2.1 above; in September the seventh grade was .5 below the standard, in January .6 above; in September the eighth grade was .4 below the standard, in January .8 above. In September

the standings range from .1 to .8 points below the standard and in January from .2 to 1.6 above the standard.

On Test No. 8, Reasoning: In September the fifth grade was .3 below the standard, in January .2 above it; in September the sixth grade was .2 below the standard, in January .4 above seventh grade standard; in September the seventh grade was at the standard, in January .8 above eighth grade standard; in September the eighth grade was .2 below the standard, in January 1.6 above. In September the standings range from .3 below to the standard, and in January from .2 to 1.6 above the standard.

In comparing the standings at the beginning and the end of a semester, we see that the time at which a test is given makes a very great difference in ranking of any grade. At the beginning of the semester the standing ranges from a few points below to the standard in any grade. At the close of the semester the standing is in advance of the standard for the grade, usually one year. For instance, the 8-B does only half the work of the eighth year; the standard for eighth grade is made up from the whole year, yet the Boise 8-B ranks above the eighth grade standard.

In Mr. Curtis' discussion setting forth the purpose and advantages of the use of the standard tests in arithmetic there is no mention of the time in the term at which the test should be given. For comparative ranking of different school systems, therefore, specific instructions should be given as to the time in the semester at which the tests are given.

TABLE II—Percentage of pupils attaining the standards of various grades in Tests No. 6 and No. 7.

Grade	Below 3	3	4	5	6	7	8	Above 8
<i>Test No. 6</i>								
4th Grade.....	14.0	17	9	32	16	7	2	2
5th Grade.....	4.0	13	6	27	25	13	8	4
6th Grade.....	.4	2	1	16	18	19	20	23
7th Grade.....			1	4	10	22	19	43
8B Grade.....			.5	1	1	8	12	76
<i>Test No 7</i>								
4th Grade.....	1.0	21	32	16	19	8	2	1
5th Grade.....	1.0	7	18	14	28	19	9	4
6th Grade.....	.3	2	8	7	28	16	18	20
7th Grade.....		1	6	6	29	14	12	32
8B Grade.....			6	2	14	13	13	51

Table II shows the percentage of pupils in each grade who attain the standards of various grades in Tests No. 6 and No. 7.

Test No. 6, Speed Reasoning: Of the fourth grade pupils, 14 per cent rank below the third grade standard, 17 per cent at third grade, 9 per cent at fourth grade, 32 per cent at fifth grade, 16 per cent at sixth grade, 7 per cent at seventh grade, 2 per cent at eighth grade, and 2 per cent above eighth grade; of the fifth grade pupils, 4 per cent rank below third grade standing, 13 per cent at third grade standing, 6 per cent at fourth grade standing, 27 per cent at fifth grade standing, 25 per cent at sixth grade standing, 13 per cent at seventh grade standing, 8 per cent at eighth grade standing, and 4 per cent above eighth grade; of the sixth grade pupils, .4 per cent were below third grade standing, 2 per cent at third grade, 1 per cent at fourth grade, 16 per cent at fifth grade, 18 per cent at sixth grade, 19 per cent at seventh grade, 20 per cent at eighth grade, and 23 per cent above eighth grade; of the seventh grade pupils, 1 per cent ranks at fourth grade standard, 4 per cent at fifth grade, 10 per cent at sixth, 22 per cent at seventh grade, 19 per cent at eighth grade, and 43 per cent above eighth grade; of the eighth grade pupils, .5 per cent rank at fourth grade standard, 1 per cent at fifth grade, 1 per cent at sixth grade, 8 per cent at seventh grade, 12 per cent at eighth and 76 per cent above eighth grade standard.

Test No. 7, Fundamentals: Of the fourth grade pupils, 1 per cent ranks below third grade, 21 per cent in third grade, 32 per cent in fourth grade, 16 per cent in fifth grade, 19 per cent in sixth grade, 8 per cent in seventh grade, 2 per cent in eighth grade and 1 per cent above eighth grade; of the fifth grade pupils, 1 per cent ranks below third grade, 7 per cent in third grade, 18 per cent in fourth grade, 14 per cent in fifth grade, 28 per cent in sixth grade, 19 per cent in seventh grade, 9 per cent in eighth grade and 4 per cent above eighth grade; of the sixth grade pupils, .3 per cent rank below the standard for third grade, 2 per cent at third grade, 8 per cent at fourth grade, 7 per cent at fifth grade, 28 per cent at sixth grade, 16 per cent at seventh grade, 18 per cent at eighth grade and 20 per cent above eighth grade; of the seventh grade

pupils, 1 per cent ranks at the third grade standard, 6 per cent at fourth grade, 6 per cent at fifth grade, 29 per cent at sixth grade, 14 per cent at seventh grade, 12 per cent at eighth grade, and 32 per cent above eighth grade; of the eighth grade pupils, 6 per cent rank at the fourth grade standard, 2 per cent at fifth grade, 14 per cent at sixth grade, 13 per cent at seventh grade, 13 per cent at eighth grade and 51 per cent above eighth grade standard.

TABLE III—*Distribution of pupils in percentages with reference to the standard for their grade in tests No. 6 and No. 7.*

Grade	Test No. 6			Test No. 7		
	Below	Standard	Above	Below	Standard	Above
4th Grade.....	31	41	27	21	14	65
5th Grade.....	23	26	50	25	15	60
6th Grade.....	19	18	62	18	10	72
7th Grade.....	16	22	62	41	14	45
8B Grade.....	11	12	76	35	13	51

Test No. 6, Speed Reasoning: Of the fourth grade pupils, 31 per cent were below the standard, 41 per cent at the standard and 27 per cent above the standard for their grade; of the fifth grade pupils, 23 per cent were below the standard, 26 per cent at the standard and 50 per cent above the standard; of the sixth grade pupils, 19 per cent were below the standard, 18 per cent at the standard and 62 per cent above the standard; of the seventh grade pupils, 16 per cent were below the standard, 22 per cent at the standard and 62 per cent above the standard; of the 8B pupils, 11 per cent were below the standard, 12 per cent at the standard and 76 per cent above the standard.

Test No. 7, Fundamentals: Of the fourth grade pupils, 21 per cent were below the standard; 14 per cent at the standard, and 65 per cent above the standard for their grade; of the fifth grade pupils, 25 per cent were below the standard, 15 per cent at the standard, and 60 per cent above the standard; of the sixth grade pupils, 18 per cent were below the standard, 10 per cent at the standard and 72 per cent above their standard; of the seventh grade pupils, 41 per cent were below the standard, 14 per cent at the standard, and 45 per cent above their standard; of the eighth grade pupils, 35 per cent were below the standard,

13 per cent at the standard and 51 per cent above their standard.

The variation of abilities below the standard may be accounted for partly by the fact that our shifting population throws retarded pupils into all the grades, and partly by the fact that our system of promotions moves on to the sixth, seventh and eighth grades pupils whom the traditional plan would leave in the fourth, fifth and sixth grades.

In Test No. 6, Speed Reasoning, the examples are very simple. The score depends on the ability of the pupil to read. Our fourth grade pupils have had practically no drill in reasoning problems, yet their ability to read enables them to rank above the standard. In the succeeding grades, also, we attribute the high standing in this test, in a large measure, to ability to read.

In Test No. 7, Fundamentals, the problems are abstract and of the character upon which pupils are systematically drilled from the fourth grade. We attribute the advanced standing of the different grades in this test to constant drills for accuracy and speed, which are used in all grades above the second.

Table III indicates a large percentage of variation, but we do not consider this unsatisfactory because it depends on the elements in the situation already explained. A slight variation would indicate rigid promotion standards and the sacrifice of the individual to traditional standards of grading.

Benefits From Using the Courtis Standard Test in Arithmetic.

1. There has been a gain of one year or more in speed and accuracy.
2. There is a gain in attention and in power of concentration.
3. Pupils are forming habits of comparing their work with standards.
4. The Courtis Tests, particularly the first five, furnish an excellent device for awakening the interests of the retarded and backward pupils, and stimulating the indifferent.

5. The Courtis Tests have been very useful in conferences with parents in justifying the teacher's estimate of the pupil's work.

6. Teachers have been stimulated and encouraged by having a standard outside their own room and their own system for comparison.

THE INTERMEDIATE SCHOOL.

The American elementary school, consisting of eight grades, retains the average pupil from the age of six to the age of fourteen. The high school, succeeding as it does the elementary school, requires the completion of an eight years' elementary course, and therefore admits the pupil at the age of fourteen or fifteen. The boy or girl who is to complete the high school course and enter college must postpone the beginning of foreign languages, algebra, geometry, etc., until the age of fourteen or fifteen. Under the present system the years from twelve to fourteen (which should be devoted to the beginning of the high school studies generally designated as college preparatory courses), are largely wasted for the pupil who is to pursue such a course. For those large groups who are now in the elementary school and who may not hope to go to college, the present rigid requirements are equally fruitless. These years from twelve to fourteen should be devoted, in their case, largely to acquiring prevocational experience.

Because of dissatisfaction with this situation, there has come to be a widespread demand that the twelve years' public school course should be organized on the six and six plan, devoting six years to the elementary school and six years to the high school. The various sections of the National Educational Association have had, during the past five years, committees collecting and interpreting data, and formulating plans for the reorganization of the public schools. These committees have substantially agreed that the six and six plan should be adopted.

Administrative difficulties have been so great, however, that in only rare instances has this plan really been worked out in any school system. The chief difficulty has been the unwillingness of the people to permit a differentiation of pupils or courses before the full eight years have

been completed. In many schools, however, the high school plan of organization and high school methods of instruction have been extended down into the eighth and seventh years in the departmental plan. College trained teachers have, also, been placed in those grades.

In some cities, pupils of the upper grammar grades are now collected in intermediate schools where favorable opportunities may be given for manual training, domestic science, commercial studies, foreign languages, algebra, geometry, ancient history, etc. While but a few schools have reached the point of differentiation of courses, many more are willing to do so as soon as public opinion will permit. The National Superintendents' Association at Cincinnati in February, 1915, practically unanimously recommended a type of development in educational administration which will probably realize the purposes of the so-called "six and six plan."

One of the recommendations of the expert survey of the Boise public schools, which was made in 1913 by Dr. Edward C. Elliott of the University of Wisconsin, Dr. Charles H. Judd of the University of Chicago, and Dr. George D. Strayer of Columbia University, was as follows:

"The Boise public schools are organized with respect to subjects of instruction with such a clear recognition of the demand of economy that it is a very short step to a readjustment of the relation of elementary schools and high school, such that a year or more of time is saved for each child. The present eighth grade has, through the reorganization of the work, become a mixture of high school courses and elementary courses. The pupils will gain in enthusiasm for their work and breadth of opportunities, if the eighth grade is abandoned and the minor adjustments needed are worked out in the high school course. These minor adjustments have been canvassed in detail and can be made without any sacrifice whatsoever of the interests of the pupils."

For the past four years the teachers and supervisors of the elementary schools have been working on the problem of economizing the time of the pupils. The determined principle of the work has been to incorporate in the course of study only that material which may function in the lives of the children. The guiding principles have been:

(1) Whatever is included in any subject for any age must be reasonably comprehensible by children of that age.

(2) Whatever is included must minister to the social needs common to ordinary American children. Corresponding principles of elimination may be formulated thus: (1) Subject matter too difficult for the majority of normal children without undue expenditure of time and energy must be excluded. (2) Subject-matter that is not essential for at least the majority of children must be excluded. These principles have permitted the elimination of some things that had previously been taught under the mistaken idea that they develop a general ability in memory and reason. There have been eliminated from arithmetic, finding the greatest common divisor and least common multiple, complicated reductions of denominate numbers, longitude and time, except the 15 degree unit, annual interest, true discount, partnership, compound proportion, cube root, the metric system, the surveyor's measure and such other topics as have been made obsolete by modern business methods. The Courtis Standard Tests have been used to determine efficiency in fundamental combinations of and operations with numbers. The results show that the eliminations enumerated above have not impaired the effectiveness of our work. The averages show that the grades rank higher than the standards and that we are constantly improving our previous records.

In spelling, a limited number of words is selected as being useful for the written vocabulary. The purpose is to secure the mastery of these limited lists for both oral and written vocabularies. Tests given each semester show a steady improvement in the proportion of words mastered.

In English, technical grammar is limited to a year in the seventh-A and eighth grades. Much attention is given to spoken English in the effort to fix the habit of correct speech. Each teacher has a list of errors commonly made by her pupils and each pupil has a list of his own common errors, so that both work together to eliminate his mistakes. In written English, a dictation test given early in the semester reveals to the teacher and each pupil the exact status regarding the common rules of capitalization and punctuation. All work together to eliminate mistakes. A similar

test at the end of the semester shows accurately the rate of gain. The realization of the exact situation by both teacher and pupil has enabled us to make marked gains by the least possible expenditure of time and energy.

The time devoted to geography has been cut to two and one-half years. The fifth year is devoted to the study of North America and the United States. Most of the time of the sixth year is given to Europe and South America, though such phases of the geography as Asia, Africa, and Australia as are of historical or commercial importance are taught. In the seventh-B grade, commercial geography, embodying a thorough review of the world's commercial relations with the United States complete the course. Thus a year of time has been saved without lessening the fund of geographical information that shall be of any life interest to the pupil.

After the American history and hero stories of the fourth year, the fifth year is devoted to the study of Greek and Roman history. The sixth year is given to the history of England and Western Europe, stressing particularly the Middle Age period as the foundation of the history for the seventh grade.

By eliminating outworn and useless material from each subject, we are able to cover the required ground in each of the traditional subjects without lessening the efficiency in any subject and we have thus been able to devote most of the eighth grade to strictly high school subjects. The eighth grade will, in the future, be given to instruction, two terms each, in English and general science, and one term each in American and ancient history, in arithmetic and algebra.

All agree that this ideal organization of work will permit the beginning in this grade of the segregation of pupils into the college preparatory group and the group which is preparing for industrial life, and which can hope for no school training beyond that which this community affords. To realize this ideal an ancient and modern language course should be offered to the college preparatory group and intensive prevocational work for those who may not hope to go to college.

To make such a scheme of organization practicable, all

the eighth grade pupils should be sent to the high school or grouped in one building so that a choice of courses might be permitted and yet each class be large enough so that the expense of instruction might be kept within reasonable limits. At the present time such groupings are impracticable. The eighth year is offered in five buildings and under the departmental plan of organization is classed with the seventh year. The classes in each building are, therefore, too small to permit a variety of courses and the expense of properly equipping the five buildings for intensive industrial work is so great that, at the present time, the District could not assume the work. But for this community to require all students to study high school English, algebra, ancient history, and general science, is not a violation of the generally accepted educational practice. Practically all the pupils go on into the high school where the opportunity for election is almost unrestricted. Such studies have, therefore, been selected for the eighth year as may contribute to a liberal education and be useful no matter what vocational trend later experience may suggest.

The necessary reorganization of the elementary school curriculum to eliminate the eighth grade as an elementary school proposition and to substitute for the traditional subjects studies that have always been reserved for the high school, has occasioned some question in the community as to the wisdom of the policy. People are more conservative in their attitude towards educational innovations than toward new adjustments to meet the demands of changing modern life in any other field of activity. Each adult is inclined to over-value the particular type of training he received and to regard with suspicion any change which will tend to discredit this sort of training received at such an expenditure of time and money. The schools are, therefore, the last institution to respond to the changing demands of modern life. In Boise the readjustment of the curriculum above mentioned was not consummated without some question by earnest, sincere, and intelligent patrons. But the reasons for the reorganization, the educational authority to sustain it, and the successful operation of the scheme in other parts of the country, have been explained at parents' meetings and in private conferences. The plan is now in operation, provok-

ing no opposition and occasioning no alarm, but, on the contrary receiving general commendation.

The elimination of elementary subjects and the substitution of high school subjects in the eighth year immediately presented the following administrative problem: Shall the public school course be cut from twelve to eleven years, and the division be seven years for the elementary school and four for the high school, or the requirements for graduation from the high school be so extended as to demand five years for the high school course? In harmony with the practice in other parts of the country, the Board of Education is adverse to cutting the course to eleven years but is in favor of extending the high school curriculum to include subjects that have been reserved for the junior college courses. For those who choose industrial courses, the one year in general culture work permits a more intensive pursual of strictly industrial courses in the four remaining years of the high school.

The school authorities of Boise have met another difficulty in this reorganization plan. Each year a number of pupils enters the high school from the rural districts. These pupils have had eight years of elementary school work but have not studied any high school subjects. Should the same number of subjects or points of work be required of them as are required of our own pupils who have done one year of high school work before they reach the ninth grade, thirteen years would then be necessary for rural pupils to complete the high school course. Many pupils move into the district from other city schools which are operating under the old plan. Should thirteen years be required of them for graduation? If these pupils be permitted to graduate from the high school with four years of high school credits, and five years' credits be required of pupils who have procured their training in our elementary school, the discrimination would seemingly be in favor of those who have had their elementary training outside of the Boise schools. But it is only a seeming discrimination in favor of the outsider. If in eight years we can give our own pupils the essentials of grade work and also one year of high school work, pupils trained in the Boise elementary school have really gained a year. They have, in the remaining four years, a greater opportunity

for election than those from the outside who come with no high school credits. When they go to college they can offer a greater number of high school credits and have a greater opportunity to gain advanced standing.

The reorganization has met with almost universal approval from teachers in the elementary schools and in the high school. Formerly the eighth grade curriculum was attacked in a spiritless sort of way because it was such a continuation of subjects with which the pupils had become surfeited. The introduction of new material awakens zeal and enthusiasm hitherto unattainable. The elimination of all but the four subjects above mentioned and the lengthening of the recitation period to forty minutes permit the cultivation of a power of concentration impossible under the old plan, which includes more subjects and has less time for each subject.

Most of the instructors who teach high school subjects in the intermediate school are college graduates who have had experience as high school teachers. They are, therefore, able to present their work just as effectively as the teachers in the high school proper.

One of the objections urged against extending the high school curriculum down into the eighth year is that the pupils are too immature to assimilate those subjects properly. During the school year 1913-14 the first year of high school English was taught in the last year of the elementary school and in the first year of the high school. The same text was used, the same method of presentation pursued. Those classed as 9-B in the following table had done the first year of English in the elementary school and those classed as 10-B had done the same work in the high school. In the fall of 1914 both 9-B's and 10-B's took second year high school English. They were not segregated but were registered for English without regard to whether their work for the previous year had been done in the intermediate or the high school. At the end of the first semester a study of the grade report of each student was made to determine the relative standing of the 9-B's and the 10-B's. The pupils are graded as 1, 2, 3, 4, or 5, 5 being a failing mark.

TABLE I—*Percentage of pupils receiving the various grades.*

Grade	1	2	3	4	5
9-B	20	44.2	30.5	4.1	1.2
10-B	13	30.5	38.5	14.5	3.5

Of the 9-B's, or those who had done the first year of English in the elementary schools, 20 per cent made 1, or the highest mark, while only 13 per cent of those who had done English in the high school made 1; 44 per cent of the 9-B's made 2, or the next grade, while only 30.5 per cent of the 10-B's made 2. Only 36 per cent of the 9-B's made 3 and below while 56 per cent of the 10-B's made 3 and below. The grades made in the second year were thus better for those who had done the first year of English in the elementary school. There are, however, some unfair elements in this comparison. The 10-B's included all those who had come into the high school from rural and other schools while the 9-B's had all come from our own schools. But the 10-B's had done their first year of English in our high school.

The record of students in the second semester of the high school made after ten weeks of work were also investigated. In the following table those designated as intermediates were the pupils who had done the first semester of work in the elementary schools and those classed as high school pupils had done this work in the high school.

TABLE II—*Percentage of pupils receiving the various grades.*

	1	2	3	4	5
<i>English..</i> { Intermediate	29	29	31	9	2
{ High School	19	43	33	4	
<i>Algebra .</i> { Intermediate	24	29	32	12	2
{ High School	16	46	26	11	
<i>History..</i> { Intermediate	34	28	29	8	4
{ High School	19	26	32	18	

An examination of these records revealed the fact that pupils who have done the work of the first term of the high school in the elementary school, or the eighth grade, come into the high school, enter the second term of algebra and history and the third term of English, compete with older students who have done the first semester of

those subjects in the high school, and make just as good records.

TABLE III—*Two-minute speed test for addition in algebra.*

	Median after six weeks of work	Median after eighteen weeks of work
Intermediates	34	54
High School	29	42

A number of other comparative tests of pupils in the intermediate school and the high school justify the contention that pupils who have completed the seventh year of the elementary school in Boise, as now organized, are mature enough to enter at once upon subjects formerly reserved for ninth year work in high school.

Summary.

Elimination of waste through unnecessary repetitions and teaching useless topics has saved a year in the elementary school for intermediate high school work without any sacrifice of the interests of the pupils.

The introduction of new material results in a gain in enthusiasm on the part of pupils and in broadening their opportunities.

Fewer subjects and a longer recitation period produce greater concentration and initiative on the part of the pupils.

Teachers with better scholastic equipment can be obtained for the intermediate work than are obtained for the grades.

Pupils from the intermediate schools are able to enter second or third term high school classes and rank well in comparison with high school students.

THE ELECTIVE SYSTEM.

The Boise high school like many other high schools of the present day is confronted by certain problems which grow out of the complexity of the course of study and the consequent difficulty of properly adjusting each child to the work that shall develop the special type of ability he

possesses and which shall best serve his own vocational needs. The complexity of present day school opportunity renders imperative the adoption of some clearly defined principle to guide students and a practical device for putting this principle in operation.

The requirements for graduation from the Boise high school are that thirty-two semester credits shall be obtained. These thirty-two semester credits represent four different studies each semester for the eight semesters. The thirty-two credits may be procured from a curriculum that offers more than one hundred units from which the choice may be made. If the pupils are to distribute their work over such a broad field of choice, a very liberal scheme of election must be permitted. The scheme adopted in Boise is to require three years of work or six credits in English and to permit each student to select the additional twenty-six credits necessary for graduation to fit his own vocational needs. This choice may be made from the following curriculum:

<i>English—</i>		<i>Spanish—</i>	
1st year.....	2	1st year.....	2
2nd year	2	2nd year.....	2
3rd year	2		
4th year	2	<i>Agriculture—</i>	
		General	2
<i>History—</i>		Farm Management.....	1
Ancient	2	Machinery	1
Medieval and Modern..	2	Horticulture	2
American	2	Animals	1
		Dairying	1
<i>Mathematics—</i>		Agricultural Chemistry	2
Algebra	2	Industrial Biology.....	2
Plane Geometry.....	2	<i>Commercial—</i>	
Higher Algebra.....	1	Bookkeeping	4
Solid Geometry.....	1	Writing	1
Trigonometry	1	Correspondence	1
Surveying	1	Commercial Geography	2
<i>Science—</i>		Commercial Law.....	1
Botany	2	Commercial Arithmetic	2
Zoology	2	Shorthand	4
Physics	2	Typewriting	2
Chemistry	2	<i>Manual Training.....</i>	<i>4</i>
Household Chemistry..	2	Concrete Construction..	2

<i>Latin—</i>		<i>Mechanical Drawing—</i>	
1st year.....	2	Elementary	2
Caesar	2	Machine	2
Cicero	2	Architectural	2
Vergil	2	Lettering	1
<i>German—</i>		<i>Home Economics—</i>	
1st year.....	2	Cooking	4
2nd year.....	2	Sewing	4
3rd year.....	2	Costume Design.....	2
4th year.....	2	Art	6
<i>French—</i>		<i>Music—</i>	
1st year.....	2	Glee Club	2
2nd year	2	Orchestra	2
3rd year	2	Harmony	2
4th year	2	Expression	4

In permitting the student to select eighty per cent of his studies, the danger of license must be prevented. The pupil, upon entering the high school, and even while he is yet in the grades, is made acquainted with the purpose and trend of each course. The selection of studies is there left to the pupil himself, but this selection must be confirmed by the parents and the teacher advisor.

The Teacher Advisor.

Much has been written in recent years about vocational guidance. Some very fortunate schools are able to employ experts to determine and direct the vocational trend of students, to make psychological and physiological tests, industrial surveys of the community, to collect for their own guidance all the experience of all the laborers in this new field of educational research. In most schools, however, the regular teachers must act as vocational guides. They are probably as able as any other agents to assume this great responsibility. They have access to all the educational history of their pupils, their successes and failures in educational endeavor, the mothers and fathers, and the family resources available for the educational equipment of those for whom they are responsible. The teachers are permanent members of the community and can know definitely its industrial possibilities. The teachers, therefore, being home friends of long standing are just as capable

to act as vocational guides as foreign agents no matter how expert may be their knowledge.

The Advisory System.

When a pupil enters the Boise high school, he selects one of the teachers for an advisor. If, as is often the case, he has no choice, then the principal makes the choice for him. In selecting an advisor it is intended that each pupil shall have for his advisor that teacher who, because of his personality or of the subject he teaches, will be most likely to maintain the most helpful relationship with such pupil. In our plan it is therefore very desirable that a pupil have the same advisor during all his four years in high school. The principal makes such changes in advisors as he thinks will be of the most benefit to pupils. The average number of pupils to an advisor is from twenty-five to thirty. Following is a brief synopsis of the duties of advisors:

1. To become as familiar as possible with the scholastic record of every pupil assigned to his advisory before time for the term enrollment to begin.

2. To become so intimately acquainted with each pupil's environment, his likes and dislikes, his ambitions and desires, that vocational guidance may be given intelligently.

3. To become acquainted as early as possible with the parents of all his advisory, so that the home and the school may enter into and maintain that co-operation absolutely necessary to the successful school.

4. To confer with each pupil in his advisory individually and make assignments to classes.

5. To take every precaution necessary to see that each pupil is properly enrolled in the classes best suited to his individual needs.

6. To meet his advisory for fifteen minutes at the opening of school each morning for the purpose of taking attendance, demanding excuses for absence and tardiness, making announcements and attending to such other advisory duties as are necessary.

7. To keep a complete record of attendance on the attendance cards provided for that purpose, and to notify the office of any changes in address, etc.

8. To check up carefully on all cases of absence and tardiness, each advisor being held responsible for the development of right habits of regularity and punctuality in all his group.

9. To check up as frequently as may be necessary (monthly, weekly, or sometimes even daily) upon the kind of work which each of his group is doing, taking every precaution necessary to keep each pupil working up to his full capacity.

10. To enter the record of attendance upon the report cards, hand out these cards, and check their return when properly signed.

11. In brief, to hold himself absolutely responsible for keeping every pupil in his group in the best possible attitude toward the school and school work.

The selection of the course of study is made by the pupil, himself, but his selection must be confirmed by the teacher advisor after conference with the parent. The teacher's part in this proceeding is to advise, not to require. The pupil is looking forward to his future but often with a very vague notion of where this road or that road may lead him. The teacher has traveled that road and often his experience is safer as a guiding force than the pupil's vague longings and caprice. The teacher, as a directing agency, is also necessary to enlist the thoughtful attention of the parent to the vocational possibilities the school is able to offer his child and to demand that the parent be a party to the final choice.

The limitations of the teacher advisor plan as practiced in Boise are not that the teacher lacks interest and enthusiasm in discharging faithfully the duties thus imposed upon him. All have approached this difficult task with zeal and energy. But each is more or less inclined to view this problem from the standpoint of his own special field of intensive study. Each very naturally values highly the particular type of education that he acquired by years of hard labor and great sacrifice. The doctrine of formal discipline was firmly impressed by the teachers of a generation ago.

To induce all teachers to eliminate the personal equation and to define clearly their individual notions and to study the extent and nature of variations of individual opinions, Principal C. E. Rose of the high school proposed

to all the high school teachers the following hypothetical case: "A young man is entering the high school and asks to be advised as to just what studies he ought to take during his four years in school. You are convinced that he cannot or will not attend more than four years of high school. After that he says he expects and desires to go into the grocery business with his father. Kindly indicate below the number of credits you would recommend that he receive in each study enumerated. Make your totals exactly 32. (The numerals after each subject indicate the number of credits offered in this school)."

[illegible]

The following program of studies for the young retail grocer was obtained from the foregoing table by taking the thirty-two units or credits which received the greatest number of "votes" from the advisors. This program then is the consensus of opinion of the thirty-five advisors:

English, 4 years.....	8 credits	
American History	2 credits	
Algebra	2 credits	
Physics	2 credits	
Chemistry	2 credits	
German, 1 year.....	2 credits	
	<hr/>	18 credits
Bookkeeping, 2 years.....	4 credits	
Writing	1 credit	
Correspondence	1 credit	
Commercial Arithmetic.....	2 credits	
Commercial Geography.....	2 credits	
Commercial Law	1 credit	
Typewriting	1 credit	
Manual Training.....	1 credit	
Lettering (Mech. Draw.)..	1 credit	
	<hr/>	14 credits
		<hr/>
		32 credits

In the table below is given a comparison of the summary (Column 1); the judgment of Advisor No. 29, who came the closest to the consensus of opinion (Column 2); the judgment of Advisor No. 7, who gives the maximum of traditional subjects (Column 3); and the judgment of Advisor No. 24, who gives the maximum of industrial or vocational subjects (Column 4).

Subject	1	2	3	4
1st year English.....	2	2	2	2
2nd year English.....	2	2	2	2
3rd year English.....	2	2	2	2
4th year English.....	2	2		
Ancient History.....			2	
Modern History.....			2	
American History.....	2	2	2	2
Elementary Algebra.....	2	2	2	2
Plane Geometry.....		2	2	
Solid Geometry.....			1	
Botany.....		2		
Physics.....	2	2	2	
Chemistry.....	2		2	
1st year German.....	2	2	2	
2nd year German.....			2	
3rd year German.....			2	
Bookkeeping.....	4	4		4
Writing.....	1	1		1
Correspondence.....	1	1	1	1
Commercial Arithmetic.....	1	2	2	2
Commercial Law.....	1	1		1
Typewriting.....	1			2
Horticulture.....				2
General Agriculture.....				2
Animal Husbandry.....				1
Lettering.....	1	1		
Manual Training.....	1			4

Fifty-four per cent of all the assignments were for traditional subjects and forty-six for vocational studies.

The value of the study to all has been to show that the composite opinion so nearly distributed the assignments between traditional and vocational subjects. The discussions growing out of the investigation will surely correct the extremes of variation in individual attitudes. Teachers and parents, generally, approve the liberal election system. Anticipated evils have been avoided by having the choice confirmed by the teacher advisor and the parent.

The teacher advisor has other duties to perform beside that of supervising the selection of a program of studies. Each teacher is expected to keep the greatest possible per cent of his group in school for the entire four years' course. The importance of retaining pupils in school for the full four years is shown by the contrast in the two following reports: "The Massachusetts Commission on Industrial and Technical Education, which tabulated information of over three thousand families of the state whose children had quit school to go to work, discovered that 66 per cent of these families could have kept their children in school; 33 per cent of these children were found in unskilled industries; 65 per cent in low grade industries;

and less than 5 per cent in high grade industries. The boys left school for a job, not to learn a trade. All sorts of attractions had appealed to them and they had drifted from one thing to another. This is waste, pure and simple, from whatever standpoint it is viewed. What these children might have done had they remained in school and completed the high school course, is shown by the Report of the Student's Aid Committee of the New York City High School Teachers' Association in Vocational Guidance. The aim of this committee is to secure employment for pupils during vacation and during out-of-school hours, in order to earn a part of their support; to advise those who are ready to leave school in the choice of a vocation; to direct them in how to fit themselves for their chosen vocation; and to aid them in securing employment that will lead to success in these vocations. The committee learned that ten thousand pupils who completed courses in the New York High Schools easily found employment, but a report of 193 representatives of labor unions showed that sixty thousand or 28 per cent were out of employment, while a canvass of all the eleven hundred graduates of an evening high school showed only 3 per cent out of employment. As against the statistics from Massachusetts, which showed that those who had left school in the early part of their school career, were aimlessly drifting in unskilled industries, stands the significant fact that high school pupils in New York, more than 90 per cent of them, had helped themselves to find positions, obtained work and held their jobs, and that the committee had succeeded in placing those who needed help." (Greenwood).

In Boise, practically all children who have any ability complete the work of the elementary school. A recent careful census showed only 47 pupils under 18 years of age who had not completed the elementary school or were not, at the time of census taking, in school. The high school teachers have been laboring intensively to keep all the pupils in the high school for the entire course.

Each advisor is responsible for his own group of twenty-five. The first fifteen minutes of each morning session, every teacher spends with his own group. He checks up attendance, sees that no absence from school

or any class is permitted unless it is absolutely unavoidable. Report is immediately sent to the advisor if any of his pupils are doing unsatisfactory work with other teachers. If unsatisfactory work is reported, the advisor immediately confers with the delinquent student and with his parents, and better work almost always results. Thus this individual labor with every student who begins to do poor work or begins to attend school irregularly keeps the school mortality at a very low per cent and every student is held to a standard of achievement which more nearly measures up to the maximum of his power than any purely group method of treatment could accomplish. Careful checks are kept of the success of each teacher in adjusting each student to the type of work that he should pursue and keeping him up to a satisfactory standard of performance of his assigned labors, in preventing unnecessary absence, and retaining him in school for the entire course.

INDUSTRIAL EDUCATION.

“The modern contention is that a man’s adjustment to the world in which he lives is dependent upon three types of training: (1) A general or liberal education which will give him a command over those human institutions in which he holds a membership in common with other men; (2) a specialized vocational education which will fit him for a particular economic function; and (3) an apprenticeship to his specific work and station in life which will snugly fit his theoretic education to the concrete and practical situations which he must meet.” (Economy of Time in Education). The general and liberal education is the type of training which the public schools have long been accustomed to impart. It thus presents no new difficulty. Within its present organization and even with its present force of teachers, trained only along traditional lines, the high school can conduct some phases of specialized vocational education. Organized facts and principles underlying industrial trades may be attacked just as traditional subjects are studied. Drill in technique may cultivate a type of skill in manipulation of the tools of the various trades. All these and many more phases of in-

dustrial education may be taught in the school room under the present school organization.

But apprenticeship under real life conditions presents a more difficult administrative problem. Co-operation between the school and the community is a new relationship which presents new educational problems. To accomplish this aim, a series of co-operation between the school and the community must be established which will guarantee an apprenticeship under actual life and working conditions, the supervision of which is to be dominated by educational ideals and control which guarantee that the growth of the apprentice shall be a more important consideration than his commercial productiveness, which was the only dominating motive of the old apprenticeship system of trade education. The difficulty confronting the present public school management is to furnish apprenticeship training which shall retain the educational ideal and minimize the productive factor and also make this training function in real life situations.

The school authorities of Boise have attempted to give the pupils training which shall retain the educational ideal and also furnish apprenticeship labor in real life situations instead of in artificial school projects.

Agricultural Education.

The City of Boise is situated in the Boise Valley, and depends for its support upon four hundred thousand acres of irrigated land. The system of irrigation includes a storage reservoir erected by the Government at a cost of six million dollars. The cost of the land and the water are, therefore, so great that scientific agriculture, horticulture, and stockraising are necessary to make the industry yield an income on the large investment per acre.

Under these conditions, agriculture must always be the prevailing industry of the entire community. The cost of production is so high that all the literature of agricultural research and all the successful experiments to increase production and to elevate the standard of products, must be applied to put the industry on an income producing basis.

With such community environment, agricultural educa-

tion should be the most important type of vocational education available to the pupils in the schools. During the present school year this department has enrolled more than one hundred and fifty pupils, and three teachers have furnished instruction in farm crops, farm soils, farm machinery, farm management, horticulture, animal husbandry, agricultural chemistry, food chemistry, and industrial biology.

The cereal, forage, and root crops suitable for growing in this region are studied. Emphasis is placed upon the value of rotation, seed selection, cultivation, methods of propagation, methods of soil management to secure the highest yields, as well as the common insects, plant diseases, and weeds.

The dominating ideal of the department has been to make the connection between the school and the agricultural industry of the community close, vital, and complete. In the fall of 1913, Mr. H. W. Hochbaum was employed to supervise the department of agriculture in the high school and to act as agricultural agent for Ada County. Three thousand dollars were provided for his salary and expenses, the Board of Education furnishing one-half of this sum and the Commercial Club of Boise subscribing the other half. Mr. Hochbaum spent three days of each week in the school supervising instruction in agriculture and three days in the field directing all the distinctive enterprises in agriculture, horticulture and stock-raising for the entire valley. The entire county thus became a working laboratory for the agricultural department in the high school. The students were taken into the country and studied all the projects the County Agent was directing. In school they had studied the principles underlying all these enterprises. On the farm in real working and practical situations, they were shown the application of these principles. During the summer, Mr. Hochbaum secured employment for boys on farms that were really under his supervision. The farmer paid the boys for their labor and they received credit in school for laboratory work in agriculture.

In the spring of 1913, the Board of Education leased a ranch within a convenient distance from the school, which contained a commercial orchard of several varieties of

apples, productive berry tracts, and ample room for vegetable and field crops. The students were taught, upon this ranch, under real life conditions, to plant, spray, cultivate, prune and irrigate fruit trees, to pick, pack and market the products; to pick, pack and market a great variety of berries; to plant, cultivate and sell the types of vegetables and field crops adapted to this region. On this farm, every phase of irrigation was studied and applied.

The Board of Education, four years ago, purchased a forty acre tract of land on the bank of the Boise River, easily accessible to all the school buildings in the city. A landscape artist was employed to furnish plans and specifications for the improvement of this tract into a modern playground, containing football and baseball fields, children's playgrounds, swimming lake, wading pool and outdoor gymnasium. For the past three years, the department of agriculture has been developing this playground according to the plans and specifications. A variety of trees and shrubs were called for by the specifications. These might have been bought, but, for training in forestry, a school nursery was started in which these trees and shrubs were propagated and grown. This work has been conducted under the supervision of an instructor who has a Master's Degree in Forestry from Yale and has had two years' experience in the United States Forestry Department.

Mr. Hochbaum, in the process of his duties as County Agent, organized a dairy association with a membership of about thirty ranchmen who owned several hundred cows. The boys in the dairy classes went to these dairy farms once each month, were entertained, each on a different farm, for the night, collected samples of the milk from each cow, brought it into the laboratory, tested it and kept a record of the tests of each animal. The dairymen thus learned which of their cows were income producing propositions and which were boarders. The boys were paid a nominal sum for this work by the farmers and were given laboratory credits for their time in the school. In this way, the boys came into close personal and social contact with the most intelligent ranchmen in the valley.

Much attention has been directed toward stock-raising

and dairying in the Boise Valley. The school authorities have been in entire sympathy with this movement and are attempting to keep in the front rank of promoters. An instructor was employed at the beginning of this school year, who had graduated from the Dairy Department of the Utah Agricultural College, had studied dairying for two years in Belgium and Holland, had taught the subject in the Utah Agricultural College and for the past two years had been managing his own dairy farm and dairy herd. The Board of Education leased for a term of five years a farm located a little over a mile from the high school and is now conducting a modern dairy on this ranch. The herd consists of sixteen high grade Holstein cows. Mr. Clawson Y. Cannon, the instructor in this department, lives upon the farm and has accepted the responsibility of making the business pay, as well as furnish exceptional facilities for practical work by the students of that branch of farm instruction. This farm also has two good apple orchards which furnish excellent practice for the horticultural classes. Ample fields are now in cultivation to furnish practical lessons in grain and forage crops. A concrete silo will be built by the boys this spring in which they will next fall store the silage for the cows. A large number of brood sows owned by the school have farrowed during the spring. These furnish interesting lessons in breeding and feeding. Sixty or more hogs will be ready for market in the fall and will yield a handsome profit on this investment. The farm supports poultry stock and furnishes poultry products for the local market. The purpose of the school is to conduct on this farm of sixty acres and such additional land as may be rented, every phase of farm industry which may be profitably conducted in the Boise Valley, to make each department bear its own expense and produce its own profit, to have the boys do much of the work, keep all the accounts, and know the reason for the profit or loss that may result. The school farm and the various enterprises that are now being conducted there are almost as interesting to each student and the source of almost as much individual pride as would be possible were they individually owned by each pupil.

Boise is the distributing center for a large agricultural district. Three large wholesale farm implement houses are in the city as well as a number of retail establishments. These houses gladly furnish the classes in farm machinery all classes of farm tools for demonstration purposes. One merchant has permitted the students to demonstrate his wares in the field for the benefit of prospective purchasers. Arrangements were made whereby the merchant paid the boys a commission on all farm machinery thus sold, and they were also given credit in school for their labor, the amount of school credit depending upon their success as salesmen.

Manual Training.

In the manual training shops, beginners have their regular course in joinery and construction work. The routine shop drill whereby the students acquire skill in technique is not neglected.

In order, however, that they may have training under real apprenticeship conditions, they do all the repair work for the entire school, construct new equipment such as chemistry tables; benches for the mechanical drawing rooms; new benches, tool cabinets, tool panels and lockers for the wood working shop; the entire equipment for the two cooking laboratories, including the benches, tables, cupboards, built-in sinks and drain boards, and refrigerators. In the sewing room, tables, fitting stands, screens, and closets were constructed. Bookcases have been made for the offices of the supervisors and superintendent, and such benches, cabinets and closets as were necessary for the commercial department. Another feature of the work this year has been the construction of furniture for the Idaho Building at the Panama-Pacific Exposition. In the summer of 1913, a group of boys worked all summer under one of the instructors in the manual training department, as foreman, on the finishing work of the high school building. At the school park a grandstand and bleachers were built with seating capacity for two thousand. A club house including shower bath will be constructed this spring. At the school farm, gates and fences have been repaired and rebuilt over the entire farm. A planker, a split-log drag, houses and pens for poultry

and pigs, flumes and headgates for the irrigation system, have also been made by the manual training classes. For all of this out-of-school work, the Board of Education pays the boys an amount per hour that would represent the cost if regular carpenters were employed. The students are also given regular credit for the work. All jobs of work done in the community by boys in these classes are given such credit as our own building superintendent, who has made a competence as a building contractor, recommends.

Cement Construction.

In this department, the elements of concrete construction are worked out in the shop in the high school. The principles learned have recently been applied in the construction of three thousand feet of sidewalk and curb about the high school; concrete fence posts to enclose the forty-acre school playground; concrete curb about the quarter-mile race track on the same field; concrete flumes and headgates for the irrigation system; headgates, feeding troughs, watertank and hitching posts for the school farm; drinking fountains for the playgrounds for each of the grade schools; flower urns and various forms of garden furniture. A large concrete silo is now being constructed on the farm as well as the foundation and flooring for the club house at the park. Concrete flooring and feeding devices were also put in the dairy barn at the farm.

Drafting Department.

In the drafting department, students are taught elementary mechanical drawing, machine and architectural drafting, orthographic projections and developments, geometric construction problems, elementary machine design, drawings of pumps, and similar machine drawing.

Work in fancy alphabets, lettering, embossing, show cards, window cards, advertising for school activities presenting athletic meets and contests of various kinds are gotten out by the students. The diplomas for the graduates are made entirely by the students in the drafting department.

Students are taught the principles of building construction, covering drawing of complete plans, getting up spe-

cifications and bills of material for building. In this department, the plans, bills of material and specifications were drawn for the Washington and Lowell school buildings, each of which cost about thirty-six thousand dollars. The architect's fee was saved by permitting the students to do this work. This saving alone was enough to pay the teacher of agricultural drafting for two years, no architect having anything to do with the designing or construction of the building. The boys also made the first complete and correct plat map of the city and school district, consisting of fifty-six subdivisions. This map contained the location and description of all the property owned by the public school organization. This department has furnished plans for a number of rural school houses. During the past three years, many residences have been built from plans and specifications furnished by the students of architectural drafting. The following extract from the "Evening Capital News" (March 26, 1915) of Boise is given to illustrate the manner in which practical application is made of the principles of drafting learned:

"W. N. Yost, Boise valley's well known fruit grower, this week will move into his handsome new \$4800 bungalow at Bissell station on the interurban car line, two miles northeast of Meridian. This house, which is nearly completed, contains 11 rooms, is strictly modern, and is one of the prettiest suburban homes in the valley.

"An interesting feature of this house is the fact that all the specifications for its construction were made by Don Yost, the 19-year son of W. N. Yost, who got all his knowledge as an architect from the Boise high school while a student there. This speaks volumes for the efficiency of the work done at the Boise high school."

Commercial Department.

In this community are many young people who will not or cannot go to college. A considerable number of these hope to make a living by office work after they have completed their high school course. The commercial department of the Boise high school fully realizes this situation and has so arranged its work that those who wish to make special preparation for office work may do so with full assurance that when they have completed the course they

will be well prepared to assume the responsibilities office positions in real life impose upon them.

The training in the commercial department includes just as much of real business situations as can possibly be secured. The students, in co-operation with the domestic science classes, keep the books of the cafeteria. Co-operating with classes in agriculture, they keep the books of the many farm enterprises conducted by the school. This department keeps the books, attends to the purchase and distribution of all goods and supplies necessary for all phases of student body activities. This means the accounting for several thousand dollars of expenditure annually. This department conducts the students' supply department and thus purchases, sells and pays for many books and supplies each year sold to the students. It, also, supervises the purchase, distribution and payment for many school books and supplies furnished by the Board of Education. The teachers in the department, also, eagerly seek in shops and offices opportunities for their students to acquire practice in real business situations. Business men know they can at the school get a bookkeeper or stenographer for short periods and that the practice for the student is considered ample compensation. Much of the stenography and typewriting for the superintendent, supervisors and principals is done by the students in the commercial department.

In many of these situations, public money is involved; therefore all transactions conducted by students must be carefully checked by a teacher. But it takes no more time to check a real life problem than it does to check up an artificial school project.

For several years the head of the department has been active in finding employment for graduates and has placed in satisfactory positions nearly all of those who have graduated from the school and who have wished positions. In many cases, promotion of former students has also been secured through the business department of the school. It is not uncommon for those who have been out of school for several years to apply to this department for assistance of one kind or another. This close contact between the community and the commercial department stimulates the teachers to keep the school work up to a standard that insures efficiency and competency on the

part of the graduates of the department, and also finds a great opportunity for rendering a real service to the community by bringing graduates and employers together in such a way that the employer gets the kind of help he wants and the graduate gets the kind of position best suited to his capacity and temperament. The work of the true teachers in any department does not end with the graduation exercises.

There have been enrolled in the commercial department during the year just ended 297 different pupils. Two hundred and sixteen graduates of the high school and from this department are now holding business or office positions. A large proportion of these have been placed by the activity of the teachers.

An organization of advanced students and graduates was effected at the annual banquet in March, 1914. Its object is to promote greater efficiency in the school work and among the graduates after they have accepted positions, and also to find places for the members of the graduating class each year and to secure promotions for those already employed.

The following letter is a copy that each employer of office help in all southern Idaho gets each year:

May 23, 1914.

Boise City National Bank, 808 Idaho Street, Boise, Ida.

Gentlemen: We respectfully call your attention to the fact that we are giving many young people of this city and surrounding country a thorough preparation for office work, and that you are helping to pay for it. Not only are we giving them special preparation, but a general education as well.

Those whose names appear on the enclosed list will graduate this year and will want to work. Look over the list. Perhaps you know some whose names appear there.

If you are in need of a bookkeeper, stenographer or other office help, ask us to send one or more of these people for a trial now. They will be glad to show you, free of charge, what they can do.

If you are not now in need of help, kindly file the list for future reference, and remember that we can, at almost any time of the year, put you in touch with the kind of office

help you want. This is a public school and its service is free.

During business hours 'phone the High School and ask for Mr. Williams. Any other time call 1941-J.

Yours Respectfully,

HIGH SCHOOL COMMERCIAL DEPARTMENT.

JFW—MS

Director.

Illustrations of the effort to make the industrial or vocational work of the school afford training that shall have all the educational value of the old apprenticeship system, yet keeping the educational motive dominant instead of the former production motive, might be continued indefinitely. The same idea is carried out in the departments of music, art, and household economics. Teachers are becoming each year more proficient in making school and community connections.

THE CO-ORDINATION OF INDUSTRIAL STUDIES WITH TRADITIONAL SUBJECTS IN THE HIGH SCHOOL CURRICULUM.

A communication to the "Nation" from Leland Stanford Junior University (November 27, 1913, XCVII, 506) deplores the fact that industrial education is rapidly crowding out of the high school curriculum those studies usually classed as cultural or traditional. The writer asserts that teachers meet in institutes to talk about social obligation and industrial efficiency and to sneer at intellectual attainment. In all of these statements, he merely expresses an unconfirmed fear. He presents no data to justify his prediction that children will become "noisy, happy and empty" if they are permitted to select industrial subjects. This article voices the objections most frequently urged against industrial education, viz., that these newer school activities crowd out cultural subjects and fail to stimulate intellectual effort and to measure intellectual achievement.

The addition of industrial education to the curriculum of the Boise, Idaho, High School has produced some results that may comfort this writer to the "Nation" and those who share his fears. During the past five years, thirty-one years of industrial subjects have been added to

the curriculum, consisting of ten years of commercial studies, six of agriculture, six of home economics, two of industrial art, three years of shopwork in wood and concrete, and four in mechanical, machine, and architectural drafting. Nine years of cultural subjects have also been added to the curriculum, which now offers thirty-one years of industrial work and thirty-one years of traditional studies. Sixteen years or units of work are required for graduation. If students are to distribute their choice over a curriculum offering sixty-two units, unusual freedom of election must be permitted. Three years of English are required of all; each student may select to suit his own vocational needs the additional thirteen units necessary for graduation.

The most noticeable effect of this policy has been a marked increase in attendance. In 1908, there were 400 students in the high school. Last year, 997 were enrolled, and this year there is an enrollment of 1056. Five years ago, the largest class in the history of the school up to that time was graduated. There were 44 in that class. A year ago, 144 were graduated, and this year 168 will be awarded diplomas. In other words, the high school enrollment has increased 160 per cent in six years, and the number graduating has increased fourfold. (The high school enrollment now constitutes 26 per cent of the total enrollment of the school, a percentage of high school enrollment unequalled by any city in the United States of more than twenty thousand.) Whence came this unusual increase? The growth of the city did not occasion it, since the elementary school enrollment has increased only 11 per cent during the same period. The number of non-resident pupils has not materially increased, as there were collected in tuition at \$40 per capita but \$2,269 in 1914 as against \$2162 in 1909. In 1915 there was collected \$3300 in tuition. (This increase in amount over that of 1914 does not represent an increase in the number of pupils but an increased vigilance in collecting tuition.) Hence these two presumable sources of increase must be eliminated.

The inference remaining is that, as the curriculum broadened and included more and more of industrial work, many children who would not have entered a high school offering exclusively traditional courses were attracted by

the industrial studies available. The table presented exhibits the percentage of total school enrollments in the second and the seventh grades of the elementary school, and in the first and fourth years of the high school for the school years ending June, 1911, and in June, 1915.

TABLE I—*Grade percentage of total enrollment.*

Year	Second grade	Seventh grade	First year high school	Fourth year high school
1910-11	11.82	7.88	5.37	2.46
1914-15	8.19	8.59	8.73	6.4

The increased percentages of total enrollment in the seventh grade, the first, and the fourth years of the high school for 1915 show the rapidly increasing power of the school to retain the children for the full twelve years. In 1911 the high school attendance was 15 per cent of the total enrollment. In 1915, 26 per cent of the total school enrollment were in the high school. The past four years have been characterized by business depression in the Northwest, consequently the school enrollment has not increased by any immigration. The increased high school enrollment has been occasioned by the fact that a constantly growing percentage of the pupils from the grades are attending the high school, attracted by the variety of the work offered them.

Moreover, the introduction of industrial subjects has not prevented the traditional subjects from enjoying a very wholesome growth. Allowing four subjects for each of the 400 students in attendance in 1909, there were 1,600 registrations in strictly traditional subjects that year. No exact data are available, but the estimate is fair. There were as many students who registered for fewer than four subjects as there were who carried more than four studies. In 1914 there were 997 students enrolled with a total of 4,119 registrations. Of this total, there were, in traditional subjects, 2,864 registrations, an increase of 1,264.

TABLE II—*Comparative costs of High School subjects.*

English	\$163.00
Commercial	104.00
History	87.00
Agriculture	80.00
Mathematics	74.00
Science	71.00
Cooking	60.00
Modern Languages.....	59.00
Latin	57.00
Sewing	57.00
Manual Training	56.00
Art	31.00
Music	30.00
Drafting	29.00
Oral Expression	27.00
Physical Training.....	15.00
<hr/>	
\$1000.00	

It will be noted from the above table that English ranks high. The reason of this is that three years of English are required of all, but this required work in English is rapidly being adjusted, a part of it at any rate, to vocational English, which will deal with the terminologies and the problems of each special course. Commercial education also represents a large relative amount of expenditures. This is occasioned by the fact that great numbers of students in this section of the country go into commercial lines. Boise is a commercial distributing point for a very large territory between Salt Lake and Portland. With the exception of agriculture, it represents the largest industry. It is hoped that as the agricultural course develops an increasing proportion of expenditures may be found for agricultural education.

It is worthy of note, also, that in a school which represents free election, a liberal amount of the expenditures is yet represented in the traditional subjects.

The above segregation of the expenses shows that many students have been retained for the high school because they wanted the industrial work. After they have enrolled and registered for the industrial work that appealed to them, they complete their program by taking one or more cultural subjects. Industrial education has, therefore, not crowded cultural studies out of the Boise High School but has extended these traditional subjects to groups of students who would never have entered the high school had the curriculum offered cultural courses exclusively.

On this subject, the testimony of Professor Arthur Bratton, dean of liberal arts, Whitman College, at Walla Walla, Washington, is interesting. After visiting the school for one week, his comment in a local paper is in part as follows:

"You ask me for my impressions of the Boise High School. Perhaps you will best understand what I have to say if I first tell you of the mental attitude with which I came to make my visit.

"I had read and heard much of the departures from traditional educational lines, which were receiving so unrestricted a trial here. Many high schools in this section are being modified along much the same lines as are being followed here, but the vigor and whole-heartedness with which the program is being followed by your officers *
* *."

"My own education and experience had led me to regard as of the highest value those courses which are generally classed as cultural, and I was prepared to criticize any change which should seem to lessen the importance of these subjects of the high school curriculum.

Large Number of Students.

"One of the early facts which I learned here was that you have registered nearly a thousand students, a far larger number than is normal for a city of this population. Then, that your senior classes of last year and this are considerably in excess of a hundred, again a larger proportion of students completing the course than is usual. I found also that the number of registrations in the cultural courses has nearly doubled in four years, whereas the population of the city or school district shows no such increase.

"I asked several of the teachers in the cultural subjects, particularly languages, as these might be expected to suffer most, about the effect of the free election and the vocational courses on the attendance and quality of work in their classes, and found that they indorsed the opinion that on the whole the work in their departments had been helped rather than hindered. I am disposed to attach high value to these opinions * * *.

"I am convinced that not only are many pupils induced to continue in the school who would otherwise have drop-

ped out, but also that in many cases the vocational work becomes the basis of an interest in the cultural courses which increases their usefulness and the demand for them."

The writer to the "Nation" assumes that industrial courses do not stimulate intellectual effort and do not measure intellectual attainment. Many school officials assign these reasons for permitting only a limited minority of the units necessary for graduation to be worked out in industrial lines. No one, however, has ever proven conclusively that traditional branches produce greater intellectual changes in those pursuing them than industrial activities efficiently conducted. But assuming that for those in the high school who may reasonably hope to go to college courses in strictly traditional lines may be advisable and desirable, school managers should remember that students preparing for college are but a small percentage of all who might be in attendance if courses were provided for the vocational needs of the vast majority who may not hope for educational opportunities beyond those afforded by the public schools. The high school is the people's college and the officials who direct its activities should be just as careful to provide the kind of training necessary to prepare the many for industrial life as they have always been to secure adequate college-preparatory courses for the fortunate few.

The board of education in Boise awards the diploma of graduation to all students who have labored four years in the high school preparing themselves for their own chosen vocation in life. The work of the boy who has prepared himself to enter college is not discredited because the same award of merit is conferred upon the boy who has creditably completed those courses which best prepare him successfully to manage a farm.

Those who elect the vocational courses not only get some vocational equipment but they also receive the best training to stimulate their intellectual effort and to increase their intellectual attainment. In the spring of 1914 the 250 students who in the previous September entered the high school from the elementary school in Boise were classified into the highest third, the medium third, and the lowest third, the basis of classification being the grades awarded at the end of the first semester in the high school. These groups were then compared with a similar classification of

the same students, the grades at the end of the elementary school being the basis of classification. Table III shows the comparison. Those who made the study were asked to determine why there was such a varia-

TABLE III.

Elementary school	High school	Per cent
First	{ First	47
	{ Second	36
	{ Third	17
Second	{ First	40
	{ Second	41
	{ Third	19
Third	{ First	13
	{ Second	23
	{ Third	64

tion of achievement in the grades and in the high school. Why did only 47 per cent of those in the first group in the grades maintain their position in the first group in the high school while 53 per cent fell below that group? Why did only 41 per cent of the second group in the grades maintain their position in that group in the high school and 59 per cent go above or below it? Why did 36 per cent of the third group in the grades go up into the first and second groups in the high school? To determine the cause of this marked variation in the elementary school and the high school, the individual programs and grades of all the 250 students were examined. Upon entering the high school 82 students selected half or more than half their work from the industrial courses. More than one hundred elected one or more industrial courses. Of the 82 who went intensively into the industrial work, 70 advanced above the group to which they had belonged in the grades, while only 12 merely maintained their position in the same group fell below it.

To explain this situation, one might suspect that teachers of industrial subjects grade more liberally than those who teach the traditional studies. There are found, however, no foundation for this assumption. No correlation could be established between teachers who grade high and those who grade low, and those who teach cultural subjects and those who conduct industrial activities. The variation of standards in grading was quite as much among

the different teachers of English as between the teachers of English and those who teach cooking or sewing. The teachers of mathematics and modern languages varied quite as much in standards of grading as those of agriculture and bookkeeping. The curve of distribution of grades from highest to lowest was about the same for the newer school activities as that for the traditional subjects. Greater liberality in grading by the industrial teachers, therefore, could not be accepted as an explanation of the fact that students of industrial subjects tended to go above the group to which they had belonged in the grades and so to disturb the former alignment as to bring down the ones who selected the strictly traditional subjects.

Seventy of the 82 students who, upon entering the high school, selected mainly industrial work went above the group to which they had belonged in the grades because they were permitted to select courses which appealed to them and for which they soon demonstrated that they possessed some aptitude. Their former grade teachers were surprised at their high school achievements. These students accomplished little in the grades because there was nothing in the formal elementary school curriculum to stimulate, to develop, and to measure the special types of ability they possessed. The compulsory attendance law kept them in school, and so they merely marked time and in a spiritless and listless fashion did as little of the rigid work required as would be permitted. But they possessed ability undiscovered either by themselves or by their teachers. Had the high school not afforded opportunity for the exercise and the development of these special types of ability, the students who possessed them would soon have left it for the more congenial and educative atmosphere of the world outside the school.

Fifty-two per cent of all who elected one or more industrial courses went above their grade group even in the traditional studies with which they completed their programs. This means that they had always possessed abilities which in the grades had been undiscovered even by themselves. The industrial work in the high school afforded them chances to demonstrate their worth and to develop their special aptitudes. Their increased self respect and self confidence awakened new hope and new ambition.

They therefore attacked even the traditional studies with enough energy and enthusiasm to get better results than they had ever before attained. But the industrial studies had first stimulated their intellectual effort and thereby increased their intellectual attainment when it was measured by their achievements even in the cultural subjects.

The introduction of industrial education into the curriculum of the Boise High School has not, as the writer to the "Nation" and some local critics predicted, crowded out cultural education, but has wonderfully increased registrations in strictly cultural subjects.

Industrial education has not, as some conservatives prophesied, decreased intellectual effort and intellectual attainment. The pupils who elect the industrial courses develop unexpected ability to attack and to master even the cultural subjects.

CO-OPERATION OF THE COMMUNITY WITH THE PUBLIC SCHOOLS.

The expert survey of the Boise schools made in 1913, page 22, says: "Throughout the inquiry, the members of the committee have been impressed on every hand with the intimate relationship that obtains between the community and the school system." The school management and teaching force are grateful to the community for the splendid spirit of co-operation it has always manifested. Duties of administration and instruction have been made lighter by the sympathetic attitude the patrons have almost uniformly assumed.

The following partial list of items of the more recent co-operative activities of the community and the school system is submitted as significant of the community's attitude toward education. The school management submits this list with pride and gratitude as one of the evidences of the progressive spirit that pervades Boise in its effort to provide modern facilities of education for its growing population:

The Juvenile Court and the Probation Officers have at all times rendered effective aid in procuring regular and punctual attendance of children and in compelling delinquent parents to regard more seriously and to perform more thoroughly the duties of mothers and fathers.

The school nurse, Miss Harcourt, has been very successful in getting the co-operation of the dentists, physicians, and all the health department of the city.

The City Health Department, consisting of city physician, city nurse, and city health officers, have followed up in the homes all the cases referred to them by the school nurse. They have also rendered valuable assistance to the school authorities in preventing the spread of infectious diseases by enforcing rules of quarantine.

The physicians and dentists of the city have, for the past three years, free of charge, made a careful physical examination of every child in the school district and have treated, free of charge, those children whose parents were unable to pay for treatment.

Mothers' Clubs have aided the school in furnishing rest rooms, providing school gardens, and encouraging many special school activities.

The Police Department works in complete harmony with the teachers in supervising the out-of-school life of children. Those contributing to the delinquency of children are almost invariably detected and punished. Police Superintendent Robinson and his force have been unusually efficient along these lines.

The Commercial Club contributed the money necessary to make the head of the agricultural department in the high school the agricultural advisor for the county, thus making the agricultural activities of Ada County a working laboratory for the students in the high school. The club contributes toward paying lecturers for the teachers' institutes and associations, furnishes its rooms free of charge for the entertainment of guests of the school, gives luncheons and dinners in honor of educators who visit the schools, and in many other services manifests its interest in all school activities.

The Columbian Club, the largest woman's organization in the city, co-operated with the school in organizing the Boise Choral Society. This musical organization has united with the school all the adult musical talent of the city. The Columbian Club has also encouraged school children to plant flowers at home and to improve their home lawns.

The Public Improvement and Good Citizenship Clubs encouraged school children to cultivate vacant lots, to dig dandelions, and to observe clean-up days.

The farmers of the Boise Valley co-operated with the agricultural department of the high school in the organization of a Dairy Association which provided the students an opportunity to study problems of feed and milk production by testing each month some two hundred dairy cows.

The State Poultry Association is the result of the joint activity of teachers and pupils and local poultry breeders.

Every farmer who is conducting a distinctive agricultural enterprise and every breeder of high grade stock welcomes the pupils and renders them all aid possible, even to bringing onto the school grounds prize stock for the purpose of giving students a chance for stock judging contests.

The Knights of Columbus offered prizes for the best essay on Columbus, and the Commercial Club gave prizes for the best Booster Essays. The Daughters of the American Revolution have conducted contests for committing to memory the national songs, and also contests for the best patriotic essays.

The Y. M. C. A. officials conduct a grammar grade base ball and basket ball league, and co-operate with the Y. W. C. A. in recruiting classes for the night school under the management of the Board of Education.

The College Women's Club and the University of Idaho Club, each offer an annual scholarship of \$200 to send deserving high school graduates to the State University.

Implement dealers of the city furnish all sorts of machinery for demonstration purposes. One dealer in farm machinery has sent students out into the field to demonstrate farm machinery for prospective purchasers and offered a commission to the boys who made sales.

Fruit growers have hired students to plant, spray and cultivate commercial orchards, and fruit dealers are always ready to take boys into their packing establishments where practical experience may be acquired in packing fruit.

The business men of the city, furnish free or at cost, all supplies and implements used on the school farm.

The Parent-Teachers' Associations co-operate with the teachers in conducting social centers in the school buildings, thus utilizing the school plant for adult educational purposes.

The Idaho Commission of the Panama-Pacific Exposition paid for the material from which the classes in manual training made furniture to equip the Idaho Building at the Fair in San Francisco.

One of the most notable examples of school and community co-operative enterprises has been the feature parade of the Irrigation Carnival held for three successive years in Boise. The liberal amount of money appropriated by the Carnival Committee afforded the teachers and pupils an opportunity to make of the illuminated pageant they created a great school festival. To illustrate the possibilities of such an enterprise, the report of the committee having the last parade in charge is submitted.

The Rainmakers' Parade.

"Last year the Rainmakers' Parade was turned over to the public schools, and they were given a free hand and a generous sum, and told to see how good an exhibition they could make. So successful was their attempt, and so far beyond anything that had ever been seen in Boise in the past, that this year the committee on carnival arrangements would listen to no refusal, but insisted that the schools again take entire charge of the planning and execution of what is the most spectacular feature of carnival week. With the increased sum at their disposal, and the more than generous co-operation of the Idaho-Oregon Light and Power Company, the school committee, therefore, of which Mr. Meek is chairman, has prepared a set of plans and specifications which it feels sure will surpass even its notable success of a year ago.

"The parade, of thirty floats and twelve hundred marching children, is to be divided into three main sections, in each of which some special feature will be worked out. The first division represents the nursery tales and legends so dear to the children's hearts. At its head is Old Mother Goose herself, flying to the moon on her famous bird. After her come her most celebrated characters, each properly attended. Little Boy Blue is blowing his horn on a beautiful float of green, with the maize and the haystack all complete, and after him march a group of sixty Little Boy Blues, each blowing his own horn to good purpose. Then comes Mistress Mary's garden with Mistress Mary herself, quite contrary, watering their nodding little human heads,

and behind her float march the little poppy and lily and daisy girls. Next comes the Old Woman Who Lived in a Shoe, with her harassing, overnumerous, unmanageable offspring. She is followed by another character famous for his troubles—The King whose pie, when it was opened, proved more musical than edible, and after the monarch will be seen the marching blackbirds, a hundred strong, though there were but four and twenty in the song. So,—many of these nursery people had their times of trial,—the next two ladies are both known to us through their distress. They are Little Miss Muffet, whose spider will be shown quite large enough to justify her terror, and Poor Bo Peep, who, even with the aid of a hundred other shepherdesses, all costumed, equipped with crooks, cannot find her lost sheep. After this pastoral tragedy comes the gorgeous court scene of the Queen of Hearts, whose thievish knave cannot resist her tarts. Next Bobby Shafto, in a real boat, will wave farewell to his love, while fifty jolly little Jack tars follow in his wake. The division closes with one of the most popular monarchs of history, Old King Cole, whose pipe and bowl and Fiddlers Three will all be faithfully shown.

“The second section is given over to Fairy Tales and Legends. No less a personage than Titania, the Fairy Queen herself, will lead the van. She will ride surrounded by her court, and followed by a troop of fairies and elves. To transport a bit of her own loved woodland is an easy matter for so powerful a wand as hers, and so, in her Jack-in-the-pulpit throne, under arching bowers of leaves, she will hold her court. And who so fitting to come next as the Sleeping Beauty, in her rose-grown castle, with her Fairy Prince just ready to awaken her, and little rose-clad maidens marching after. Then poor dear Cinderella by her fireside—but poor no longer, for her fairy godmother, with radiant wand, is about to clothe her and transport her to the Royal Ball. And here is Goldilocks, whose curiosity has led her to the little House-in-the-woods where lived the Three Bears. After them we see bold Robin Hood, under his trysting tree, his merry men around him, while a band of archers, clad in Lincoln green, marches behind. Next comes Hansel and Gretel, hand in hand, to explore the wonderful candy house, with chocolate roof and peppermint-stick pillars, where the Old Witch is waiting for

them. The next float takes us from forest to seashore, and Lohengrin, just stepping from his swan-boat, comes to rescue Elsa. On the next, the Pied Piper of Hamelin Town is luring the children from their homes to his hill-cavern—and so powerful is his piping that eighty little German boys and girls follow his strains. Then Alice, in her Wonderland, is seen taking tea with the Mad March Hare, the Mad Hatter, and the sleepy little dormouse, who cannot keep awake long enough to enjoy his cup of tea. This division closes as did the other, with a most popular hero—Jack the Giantkiller, and the giant he has slaughtered.

“The third group of floats is representative of the Nations of the world, and the countries chosen, with typical scenes and costumes for each, are Ireland, France, Japan, Egypt, Holland, Turkey, Scotland, Germany, Africa, and our own United States. Upon this float, which is to form a fitting climax for the entire pageant, a most dazzling lighting has been arranged, and Columbia, at the prow of her Ship of State, will be the brilliant figure we all love to picture her.

“Even at this early date, all the details of costuming, building, lighting, and materials have been arranged for, and the assignments are complete down to the smallest point, for the earlier date of the carnival made it essential that these arrangements be completed at once, in order that next fall’s work be not impossibly heavy. The committee is well satisfied that when Boise has seen the elaborate floats, each so carefully worked out and so brilliantly lighted, and the groups of costumed children, twelve hundred strong, she will say that the pageant is the most beautiful ever displayed in a city of this size.”

This school festival afforded an opportunity to get more educational value out of the fairy and folk stories than any other educational device. Then, too, the consciousness aroused in the pupils by the knowledge that they were rendering a community service produced distinct educational results.

As these thirty brilliantly lighted floats and twelve hundred costumed children were marched in perfect order through the streets of Boise, conducted by two troops of United States Cavalry and three bands, the thousands of spectators realized as never before the possibilities of school and community co-operation.

FINANCIAL STATISTICS

For the Fiscal Year Ending June 30, 1915

PAYMENTS.

Expenses of General Control—

Board and Secretary's office.....	\$ 1,634.92
Elections and census.....	238.88
Office in charge of building.....	480.00
Finance office and accounts.....	405.00
Superintendent's office	5,090.65
Other expenses of general control.....	208.30

Total	\$ 8,057.75
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Expenses of Instruction—

Salaries of supervisors.....	\$ 3,210.08
Salaries of principals.....	14,730.33
Salaries of teachers—regular.....	115,921.78
Salaries of teachers—substitute.....	1,103.50
Text books (not to be sold).....	2,530.19
Stationery and supplies used in instruction	4,446.51
Other expenses of instruction.....	1,122.25

Total	\$143,064.64
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Expenses of Operation of School Plant—

Wages of janitors and other employees.	\$ 10,163.33
Fuel	7,893.76
Water	547.29
Light and power.....	848.69
Janitors' supplies	1,626.45
Other expenses of operation of school plant	1,050.77

Total	\$ 22,130.29
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Expenses of Maintenance of School Plant—

Building, repair and upkeep of grounds	\$ 3,410.35
Repair and replacement of equipment..	917.21
Insurance	2,954.09
Other expenses of maintenance of school plant	1,058.90

\$ 8,340.55

Expenses of Auxiliary Agencies—

High School farm.....	\$ 4,405.60
Library books	298.66
Medical inspection (including salaries).	1,729.55

Total	\$ 6,433.81
Special activities.....	509.15

Outlays—Capital Acquisition and Construction—

High School Athletic park.....	\$ 617.25
Alteration of old buildings.....	137.30
Equipment of new buildings and grounds	161.18
New equipment of old buildings.....	2,306.56

Totals	\$ 3,222.29
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Other Payments—

Tuition refund.....	\$ 31.50
Cafeteria	889.27
Night School expense.....	512.24
Payments of interest.....	20,413.67
Text books to be sold to pupils.....	3,074.94
Miscellaneous	1,814.16

Total	\$ 26,735.78
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Grand total of payments.....	\$218,494.26
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RECEIPTS.**Revenue Receipts—**

From County	\$ 77,112.70
Delinquent tax levy.....	4,664.21
From tax levy.....	124,705.53
From tuitions	3,462.77
Rents and interest.....	1,221.92
Licenses and other revenues.....	9,964.81

Total	\$221,131.94
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Non-revenue Receipts—

Night School tuition	\$ 273.35
Sales of realty and proceeds of insurance adjustments	34.80
Equipment and supplies	279.81
Books sold to pupils.....	2,138.60
Cafeteria	389.50
Refunds	459.69
High School farm.....	236.64
Other non-revenues.....	39.51

Total	\$ 3,851.90
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Grand total of receipts.....	\$224,983.84
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Balance last report, O. D.....	1,463.02
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\$223,520.82

Less grand total payments as above....	218,494.26
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Remaining on hand.....	\$ 5,026.56
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(Signed)

GUY SCUDDER,
Secretary.

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